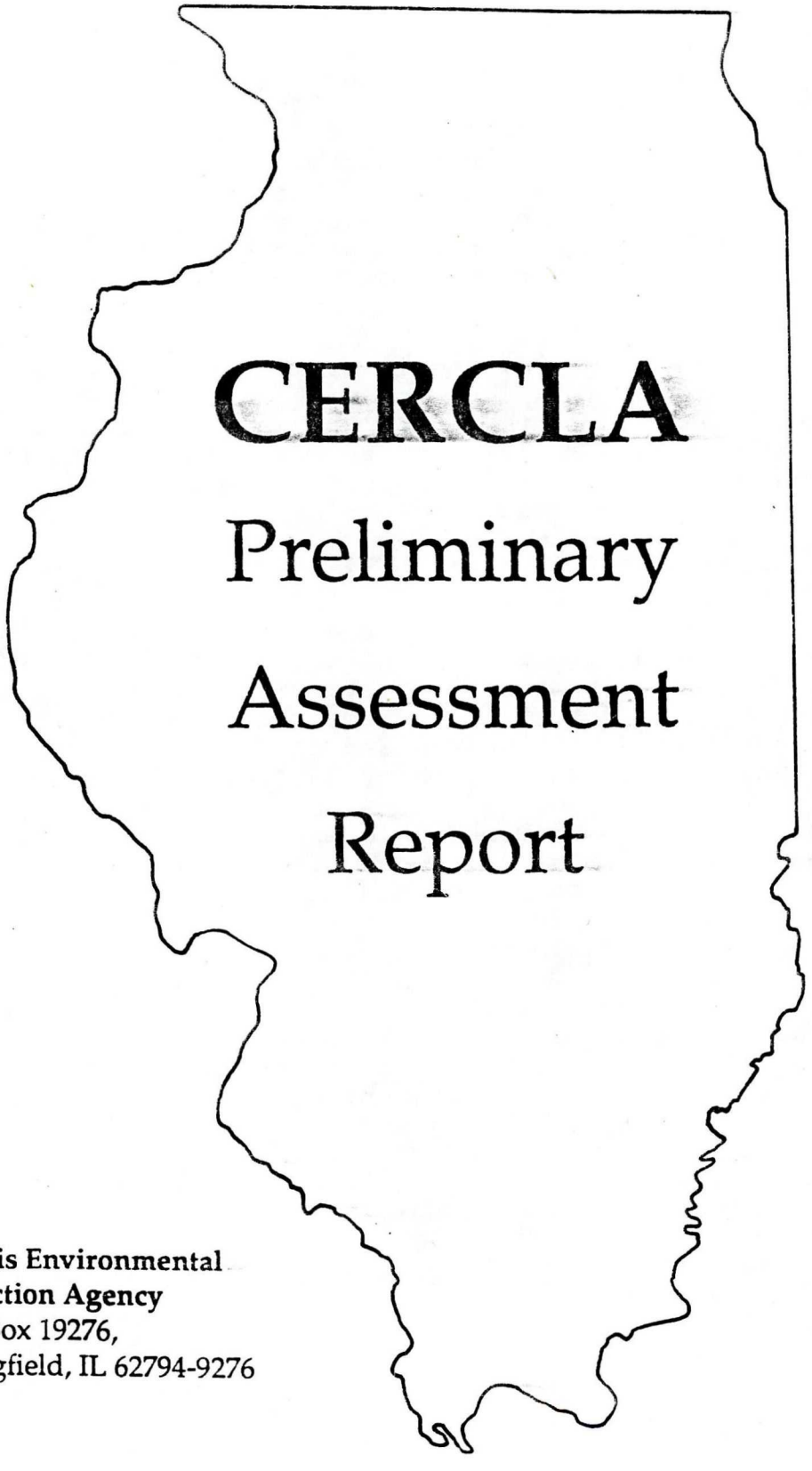
L1110900003 - McHenry Co.
Techalloy
ILD000646828
S.F./HRS



CERCLA Preliminary Assessment Report

include everything to last P

Illinois Environmental Protection Agency
P.O. Box 19276,
Springfield, IL 62794-9276

Exhibit 17

Confidential Material May be Enclosed

information on the results of their investigation or allowing the IEPA to observe and participate in their sampling.

From the early 1960's until approximately 1980, Techalloy treated their spent pickle liquor by neutralizing it with ammonia, then filtering it through a limestone filled in-ground steel lined holding bed. The liquid then traveled through a drainage tile to an unlined dry-bed pond (i.e. a surface impoundment) for evaporation. The spent pickle liquor consisted of dilute hydrofluoric, sulfuric, muriatic, and nitric acids. The drainage tile was closed off in 1969 or 1970, but the limestone bed was utilized along with a clarifier until 1980.

Since 1968 or 1969, Techalloy has intermittently operated a copper coating process in which wire was first washed in a bath of nickel sulfate, then rinsed over an in-ground tank. The wire is then dipped into a cyanide bath, and rinsed over the same in-ground tank. Until 1978, the liquid from the in-ground tank was discharged onto the ground behind the facility.
During the period of March 26 to April 4, 1990, one deep and five shallow monitoring wells were installed in the northwest corner of the facility. The deep well was constructed with a stainless steel casing and screen and had a depth of 90 feet. One shallow well was constructed of stainless steel materials and had a depth of 37.5 feet. The remaining four shallow wells were constructed with galvanized steel casings and stainless steel screens at a depth of 25 feet.

The results of groundwater sampling clearly indicates that the VOC groundwater contamination has migrated off-site. Monitoring well HRB, which is located at least 2000 feet off-site, has approximately 3700 ppb of 1,1,2 trichloroethane. Monitoring well MW-7 at the northwest corner of the facility boundary has 15,000 ppb of 1,1,1-trichloroethane. Private wells in the area have also been impacted, but as of the latest sampling event, the levels appear to be below existing MCLs. However, the sampling procedures used have not been documented and improper sampling procedures may result in artificially low levels being reported.

In 1987, Union's Public Water Supply (PWS) Well #3 was taken out of service due to excessive levels of the following inorganic parameters: ammonia, chlorides, sulfates, sodium, and potassium. A study of the Union area was conducted by Dames and Moore for California Chemical Company in 1990 after contamination of Union Well #3 was discovered. The investigation indicated that the degradation of ground water quality at Union Well #3 did not begin to occur until after 1976. In 1977, the only constituent to begin showing a perceptible upward trend in concentration was chloride. During a period from 1978 to 1982, other inorganic

bedrock. Only a few of the well logs indicate that the sand and gravel layer extends directly to the dolomite bedrock.

The aquifer of concern is the Maquoketa shale and dolomite of the Ordovician system. This system is continuous with the Pleistocene system which consists of gravels and tills. No contiguous confining layers are known to exist and thus the aquifer is considered to extend from the ground surface to a depth of approximately 250 feet.

The drinking water for Union is supplied by two community drinking water wells located in town approximately 1/2 mile to the west. The main well (#4) was recently redrilled to 760 feet due to inadequate supply at 215 feet. Well #2 is reported to be active and is screened in dolomite at a depth of 192 ft.

Well #3 was completed in March, 1962 to a depth of 80 feet below ground surface. The well has a 12-inch diameter wrought iron casing from the surface to a depth of 60 feet, followed by 20 feet of 12-inch #90 slot stainless steel screen (Woller and Sanderson, 1976). This well was taken out of service in 1987 and is reported to be a backup well. The connections between this well and the Union water supply system are believed to be intact with only a valve preventing its use. The well is reported to be occasionally used to refill tanks for fire protection.

	# wells		
distance	private	municipal	population
0-1/4 mile	6	0	148
1/4-1/2 mile	15	1	200
1/2-1 mile	17	2	470
1-2 miles	100	0	291
2-3 miles	220	0	641
3-4 miles	300	0	1324
Total	658	3	3074

The nearest surface water is the south branch of the Kishwaukee River located approximately 1/2 mile to the northeast and which flows in a northwesterly direction. No obvious surface water routes to the south branch could be found. Dry, grassy ditches could be seen bordering the roads around the facility, but no sign of adverse impact or direct connection to the plant were observed.

Access to the site is restricted by a chain link fence surrounding the facility. There are two residences adjacent to the facility to the east and southeast. A residential area also exists approximately 600 feet to the west across a field owned by Techalloy. A farm is located approximately

REFERENCE NUMBER 8

FACT SHEET

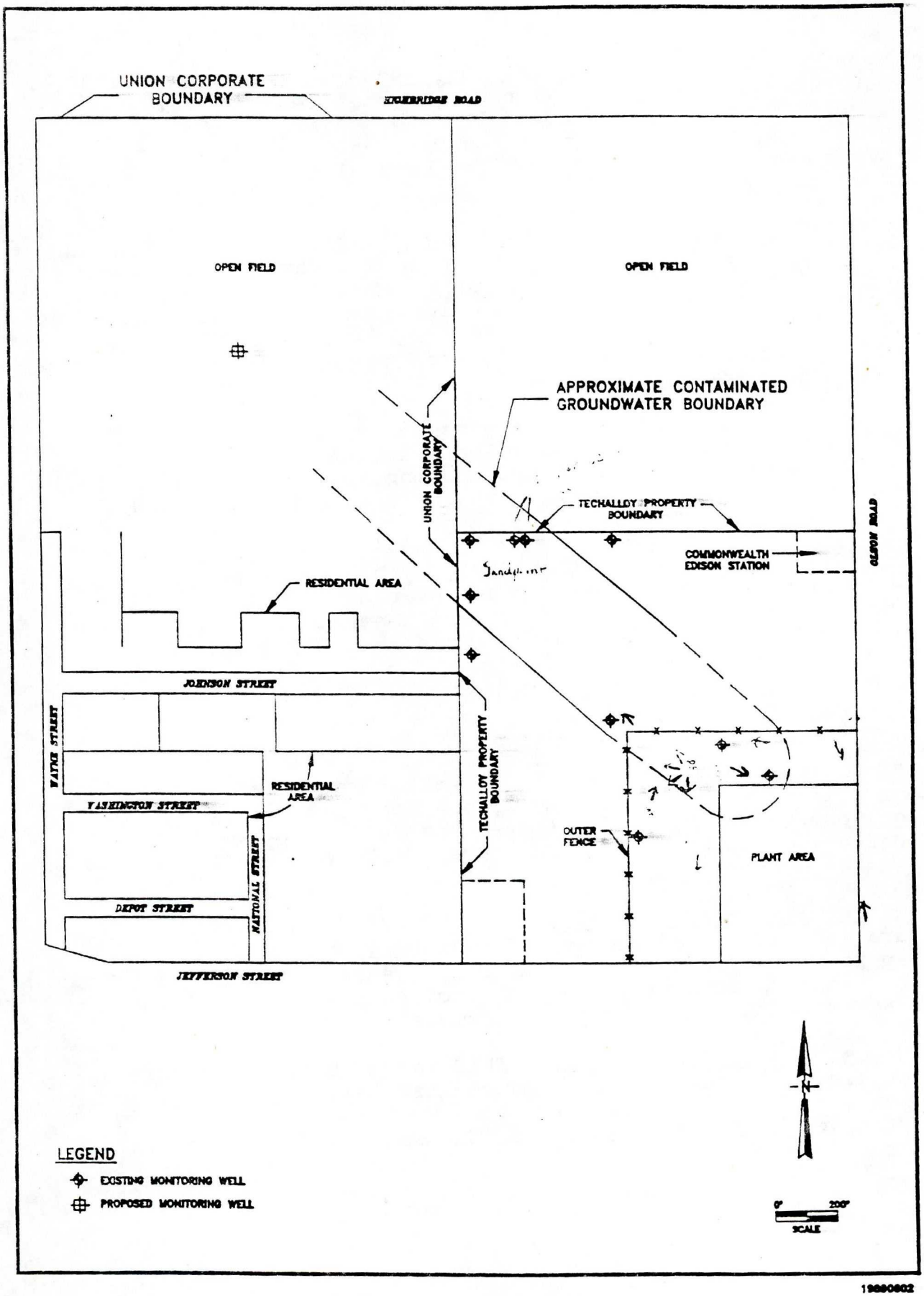
TECHALLOY, INC., UNION, ILLINOIS

The Techalloy plant is located on 40 acres or the northwest corner of Jefferson and Olsen Roads just east of Union, Illinois. Techalloy employs 118 people in three shifts and processes stainless steel wire for use by industry.

In the course of conducting an environmental assessment in January 1990, Techalloy installed four groundwater monitoring wells and found that the groundwater near the facility buildings was contaminated with low levels of solvents, more specifically, 1,1,1-trichloroethane (TCA), trichloroethene (TCE), and perchloroethene (PCE) and their by-products. These solvents were previously used by Techalloy to degrease wire.

After finding the contaminated groundwater near the buildings, Techalloy installed six additional groundwater monitoring wells in the northwest corner of the facility. The wells were placed in this area because local groundwater flows in the northwesterly direction. Samples from these wells were collected and analyzed. The results indicated that contaminated groundwater is slowly moving away from the Techalloy facility. The detected concentrations of 1,1,1-TCA, TCE and PCE ranged from 0 to 15 parts per million. For six of a total of 10 wells, the concentrations exceed the U.S. Safe Drinking Water Act Maximum Concentration Limits for at least one of these chemicals. Techalloy then promptly informed the Illinois Environmental Protection Agency (IEPA) about this situation and committed to a groundwater recovery and treatment program under the IEPA Voluntary Clean-up Program.

AB895



19980602

SITE MAP AND ENVIRONS
TECHALLOY, INC.
UNION, ILLNOIS

Wastes Generated include:

Hazardous

Spent Acids (Pickle Liquor) (D002, D007) - This waste is generated from spent pickling baths that remove scale from wire. Approximately 3,000 gallons/1-3 times a month are generated and manifested to Envirite in Harvey, IL for treatment. The waste is removed by tank truck directly form the process.

Pickling Rinse Waters (D002, D007) - This waste is generated from rinsing the wire off between acid baths (tanks are located beneath acid baths). Approximately 5,000 gallons/1-3 times a month are generated and manifested to clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is removed by tank truck directly from the two tanks (10,500 and 16,500 gallons).

ADC Sludge (D002, D007) - This waste is generated from cleaning the rinsate tanks. Approximately 605 gallons/2 months (varies) are generated and manifested to Clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is accumulated in drums.

Used Plating Filters (F008, D003) - This waste is generated from changing the filters in the plating tanks. Approximately 110 gallons/year are generated and manifested to Cyanokem in Detroit, MI for treatment and disposal. The filters are accumulated in drums.

Non-Hazardous

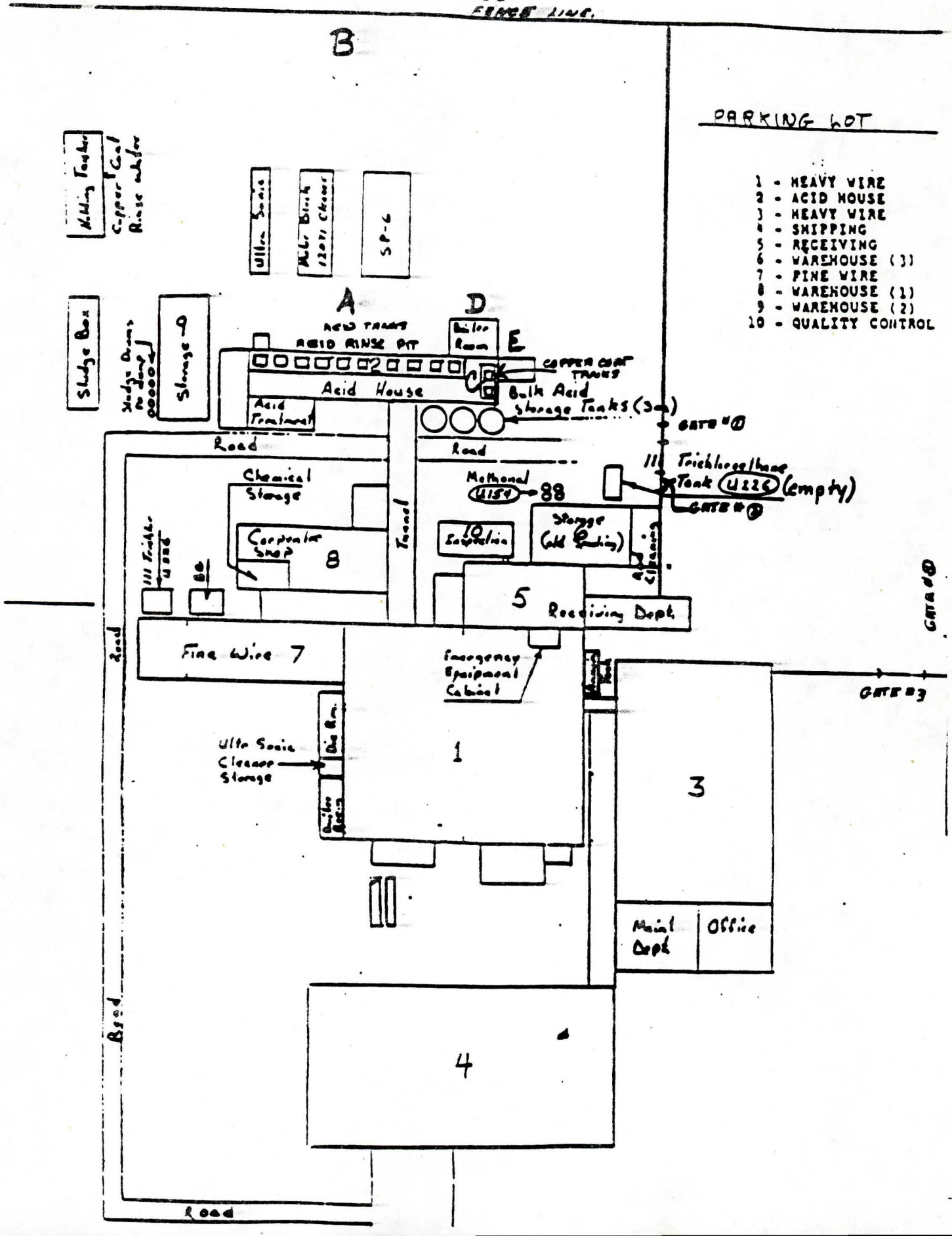
SP-6 Sludge - This waste is generated from cleaning the tank of soap coating for drawing wire. Approximately 165 gallons/2-3 years are generated and manifested to Clean Harbors of Chicago, Inc. in Chicago, IL for treatment. The waste is accumulated in drums.

Waste Oils (high viscosity) - This waste is generated from drawing wires that require high viscosity oils. Approximately 2585 gallons/year are generated and manifested to Clean Harbors of Braintree, Inc. in Braintree, MA for incineration. The waste is accumulated in drums.

Waste Oils (water soluble) - This waste is generate from cooling dies in machines. Approximately 275 gallons/year are generated and manifested to Clean Harbors, of Chicago, Inc. of Chicago, IL for treatment. The waste is generated in drums.

Up-dated Storage Plan

12-3-05



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: 00064628

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Techalloy	Jefferson and Olson Roads				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Union	IL	60180	McHenry	111	
09 COORDINATES LATITUDE: 42 14 05.0	LONGITUDE: 88 31 55.0	Marengo North Quad			

10 DIRECTIONS TO SITE (Starting from nearest public road)
Highway 176, South on Union Road, east on High Bridge Road, South on Olson Road to Jefferson

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
Techalloy	84 Business Drive		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Armonk	NY	10504	(914) 273-4500
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Techalloy	Jefferson & Olson Roads		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Union	IL	60180	(312) 263-6232

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 3/6/91 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1960 (BEGINNING YEAR) | — (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Chlorinated Solvents, Heavy metals, Cyanide

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Solvents (Environment, Population)
Metals (Environment, Population)
Cyanide (Environment, Population)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☒ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Henry Lopes	Techalloy			(914) 273-4500
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Hank Konzelmann	IEPA	State of Il.	(217) 782-6760	4/8/91 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	0006468 28

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A SOLID
- B POWDER, FINES
- C SLUDGE
- D OTHER (Specify)
- E SLURRY
- F LIQUID
- G GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

- TONS
- CUBIC YARDS: Unknown
- NO OF DRUMS: 8

03 WASTE CHARACTERISTICS (Check all that apply)

- ✔ A TOXIC
- ✔ B CORROSIVE
- C RADIOACTIVE
- ✔ D PERSISTENT
- ✔ E SOLUBLE
- F INFECTIOUS
- ✔ G FLAMMABLE
- H IGNITABLE
- ✔ I HIGHLY VOLATILE
- J EXPLOSIVE
- K REACTIVE
- L INCOMPATIBLE
- M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	Unknown		Chlorinated Solvents
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	unknown		Cyanide, Permanganate
ACD	ACIDS	Unknown		Hydrofluoric, Sulphuric, muriatic, nitric
BAS	BASES			
MES	HEAVY METALS	Unknown		Copper, nickel

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	1,1,1 Trichloroethane			15000	ppb
	trichloroethene			520	ppb
	Tetraphloroethene			1000	ppb
	Methylene Chloride			24	ppb
	1,1-Dichloroethene			720	ppb
	1,2-Dichloroethane			11	ppb
	1,1,2 Trichloroethane			35	ppb
	Copper			43	ppb
	MIBK			36	ppb
	Lead			36	ppb

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Illinois Environmental Protection Agency - Land Pollution Control Files
IEPA - Water Pollution Control Files
Illinois State Water Survey
Dames & Moore Report on Southern California Chem. Co.
Techalloy. personnel

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	000646828

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [X] OBSERVED (DATE 4/5/90) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3074 — 04 NARRATIVE DESCRIPTION

Groundwater samples collected from on-site and off-site monitoring wells have ~~dat~~ been found to contain chlorinated solvents, semi-volatiles and inorganics.

01 [ ] B. SURFACE WATER CONTAMINATION — 02 [ ] OBSERVED (DATE:) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

Unknown

01 [X] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE) — POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3074 — 04 NARRATIVE DESCRIPTION

The past practice of dumping solvents into a pad and into an impoundment specifically for evaporation indicates the existence of an air exposure route

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE:) — POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

Volatilizing solvents present an explosion/fire potential.

01 [X] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE:) — POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 118 — 04 NARRATIVE DESCRIPTION

The past practice of dumping materials onto the ground presents a high potential for direct contact. It does not appear that the dumping areas have been remediated.

01 [X] F. CONTAMINATION OF SOIL — 02 [ ] OBSERVED (DATE) — POTENTIAL — [X] ALLEGED
03 AREA POTENTIALLY AFFECTED: 10 (Acres) — 04 NARRATIVE DESCRIPTION

It has been reported by the company that materials were dumped onto the ground.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE) — POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 700 — 04 NARRATIVE DESCRIPTION

Groundwater contamination has been documented in monitoring wells in the vicinity of drinking water wells. One monitoring well (HBR) is directly upgradient of a private well and was found to contain 3700 ppb of 1,1,1-Trichloroethane.

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE) — POTENTIAL — ALLEGED
03 WORKERS POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

Unknown

01 [ ] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE) — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

Unknown

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	0006 46828

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
Unknown

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
N/A

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 3074 — 04 NARRATIVE DESCRIPTION
The surface impoundment is unlined, the evaporation pad was not diked or covered.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Unknown

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☑ ALLEGED
04 NARRATIVE DESCRIPTION
Materials were reportedly dumped onto the ground as part of normal procedures in the past

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 3074

IV. COMMENTS

A site recon: was conducted on March 6, 1991.

V. SOURCES OF INFORMATION (Cite specific references, e. g., state files, sample analysis, reports)

IEPA - Div. Land Pollution Control files
IEPA - Div Water Pollution Control files
Tecahlley
Il. State. Water Survey

EPA FORM 2070-12 (7-81)

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Tekalloy
Roy F. Weston, Incorporated
100 Corporate North, Suite 101
Bannockburn, IL 60015

Attn: Mr. Carlos Serna

Date: Friday June 15th, 1990

RE: RS05 30' Well
Project # 1989-06-01-0000
Lab ID: 9006G206-001
Sample Date: 06/11/90
Date Received: 06/12/90
Units: UG/L

Tentatively Identified Compounds

2 Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

Volatile Compound	Retention Time	Estimated Concentration
HYDROCARBON C6H14	18.66	8 J
UNKNOWN HYDROCARBON	32.50	10 J

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
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ANALYTICAL REPORT

To: Tekalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday July 9th, 1990

RE: Field Blank
Project # 1986-06-01-0000
Lab ID: 9006G661-001
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	BDL	5	U
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	BDL	5	U
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	BDL	5	U
1,1,2,2-Tetrachloroethane	BDL	5	U
Toluene	BDL	5	U
Chlorobenzene	BDL	5	U
Ethylbenzene	BDL	5	U
Styrene	BDL	5	U
Xylene (total)	BDL	5	U

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Project # 1986-06-01-0000
Lab ID: 9006G661-001
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	BDL	5	U
Acetone	4	10	JB
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	BDL	5	U
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Duplicate**
Project # 1986-06-01-0000
Lab ID: **9006G661-002**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	38	5	
Acetone	BDL	10	U
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	4	5	J
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
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Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

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3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Field Blank**
Project # 1986-06-01-0000
Lab ID: **9006G661-001**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

WESTON
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To: Tekalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday July 9th, 1990

RE: Duplicate
Project # 1986-06-01-0000
Lab ID: 9006G661-002
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Duplicate**
Project # 1986-06-01-0000
Lab ID: **9006G661-002**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	BDL	5	U
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	BDL	5	U
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	BDL	5	U
1,1,2,2-Tetrachloroethane	BDL	5	U
Toluene	2	5	J
Chlorobenzene	BDL	5	U
Ethylbenzene	BDL	5	U
Styrene	BDL	5	U
Xylene (total)	BDL	5	U

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ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Outside Spigot**
Project # 1986-06-01-0000
Lab ID: **9006G661-003**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	BDL	5	U
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	BDL	5	U
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	BDL	5	U
1,1,2,2-Tetrachloroethane	BDL	5	U
Toluene	BDL	5	U
Chlorobenzene	BDL	5	U
Ethylbenzene	BDL	5	U
Styrene	BDL	5	U
Xylene (total)	BDL	5	U

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ANALYTICAL REPORT

To: **Tekalloy**
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Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Outside Spigot**
Project # 1986-06-01-0000
Lab ID: **9006G661-003**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	18	5	
Acetone	BDL	10	U
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	BDL	5	U
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

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ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Utility Sink**
Project # 1986-06-01-0000
Lab ID: **9006G661-004**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	7	5	
Acetone	BDL	10	U
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	4	5	J
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

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ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Outside Spigot**
Project # 1986-06-01-0000
Lab ID: **9006G661-003**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

WESTON-GULF COAST LABORATORIES, INC.
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ANALYTICAL REPORT

To: Tekalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday July 9th, 1990

RE: Utility Sink
Project # 1986-06-01-0000
Lab ID: 9006G661-004
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

Tentatively Identified Compounds

1 Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

Volatile Compound	Retention Time	Estimated Concentration
ACETIC ACID, METHYL ESTER	8.92	50 J

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ANALYTICAL REPORT

To: **Tekalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday July 9th, 1990

RE: **Utility Sink**
Project # 1986-06-01-0000
Lab ID: **9006G661-004**
Sample Date: 06/28/90
Date Received: 06/28/90
Units: UG/L

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	BDL	5	U
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	BDL	5	U
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	BDL	5	U
1,1,2,2-Tetrachloroethane	BDL	5	U
Toluene	BDL	5	U
Chlorobenzene	BDL	5	U
Ethylbenzene	BDL	5	U
Styrene	BDL	5	U
Xylene (total)	BDL	5	U

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ANALYTICAL REPORT

To: **Techalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: **01TB**
Project # 1986-06-01-0000
Lab ID: **9012G351-001**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,1-Dichloropropene	BDL	0.2	U
Bromodichloromethane	BDL	0.2	U
Dibromomethane	BDL	0.4	U
1,2-Dichloropropane	BDL	0.9	U
Trichloroethene	BDL	0.6	U
Dibromochloromethane	BDL	0.2	U
1,2-Dibromoethane	BDL	0.2	U
1,1,2-Trichloroethane	BDL	0.2	U
Benzene	BDL	0.2	U
1,3-Dichloropropane	BDL	0.2	U
Bromoform	BDL	0.3	U
Tetrachloroethene	BDL	0.1	U
1,1,2,2-Tetrachloroethane	BDL	0.4	U
Toluene	BDL	0.2	U
Chlorobenzene	BDL	0.2	U
1,1,1,2-Tetrachlorethane	BDL	0.2	U
Ethylbenzene	BDL	0.2	U

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To: **Techalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: **01TB**
Project # 1986-06-01-0000
Lab ID: **9012G351-001**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Dichlorodifluoromethane	BDL	0.2	U
Chloromethane	BDL	0.2	U
Bromomethane	BDL	0.1	U
Vinyl Chloride	BDL	0.2	U
Chloroethane	BDL	0.1	U
Methylene Chloride	BDL	0.8	U
Trichlorofluoromethane	BDL	0.5	U
1,1-Dichloroethene	BDL	0.2	U
1,1-Dichloroethane	BDL	0.3	U
cis-1,2-Dichloroethene	BDL	0.3	U
2,2-Dichloropropane	BDL	0.3	U
trans-1,2-Dichloroethene	BDL	0.2	U
Chloroform	BDL	0.3	U
Bromochloromethane	BDL	0.3	U
1,2-Dichloroethane	BDL	0.3	U
1,1,1-Trichloroethane	BDL	0.2	U
Carbon Tetrachloride	BDL	0.1	U

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Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: **01TB**
Project # 1986-06-01-0000
Lab ID: **9012G351-001**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,2-Dichlorobenzene	BDL	0.3	U
n-Butylbenzene	BDL	0.3	U
1,2-Dibromo-3-Chloropropane	BDL	0.6	U
1,2,4-Trichlorobenzene	BDL	0.5	U
Hexachlorobutadiene	BDL	0.5	U
Naphthalene	BDL	0.4	U
1,2,3-Trichlorobenzene	BDL	0.7	U
cis-1,3-Dichloropropene	BDL	0.2	U
trans-1,3-Dichloropropene	BDL	0.2	U

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Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: **01TB**
Project # 1986-06-01-0000
Lab ID: 9012G351-001
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Styrene	BDL	0.8	U
p-Xylene	BDL	0.2	U
m-Xylene	BDL	0.2	U
o-Xylene	BDL	0.4	U
Bromobenzene	BDL	0.3	U
1,2,3-Trichloropropane	BDL	0.4	U
Isopropylbenzene	BDL	0.3	U
n-Propylbenzene	BDL	0.3	U
2-Chlorotoluene	BDL	0.3	U
4-Chlorotoluene	BDL	0.3	U
1,3,5-Trimethylbenzene	BDL	0.3	U
tert-Butylbenzene	BDL	0.3	U
1,2,4-Trimethylbenzene	BDL	0.3	U
sec-Butylbenzene	BDL	0.3	U
p-Isopropyltoluene	BDL	0.3	U
1,3-Dichlorobenzene	BDL	0.3	U
1,4-Dichlorobenzene	BDL	0.3	U

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To: Techalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: 9012G351-002
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Dichlorodifluoromethane	BDL	0.2	U
Chloromethane	BDL	0.2	U
Bromomethane	BDL	0.1	U
Vinyl Chloride	BDL	0.2	U
Chloroethane	BDL	0.1	U
Methylene Chloride	BDL	0.8	U
Trichlorofluoromethane	BDL	0.5	U
1,1-Dichloroethene	BDL	0.2	U
1,1-Dichloroethane	BDL	0.3	U
cis-1,2-Dichloroethene	BDL	0.3	U
2,2-Dichloropropane	BDL	0.3	U
trans-1,2-Dichloroethene	BDL	0.2	U
Chloroform	BDL	0.3	U
Bromochloromethane	BDL	0.3	U
1,2-Dichloroethane	BDL	0.3	U
1,1,1-Trichloroethane	BDL	0.2	U
Carbon Tetrachloride	BDL	0.1	U

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Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: **01TB**
Project # 1986-06-01-0000
Lab ID: **9012G351-001**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

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Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: **9012G351-002**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Styrene	BDL	0.8	U
p-Xylene	BDL	0.2	U
m-Xylene	BDL	0.2	U
o-Xylene	BDL	0.4	U
Bromobenzene	BDL	0.3	U
1,2,3-Trichloropropane	BDL	0.4	U
Isopropylbenzene	BDL	0.3	U
n-Propylbenzene	BDL	0.3	U
2-Chlorotoluene	BDL	0.3	U
4-Chlorotoluene	BDL	0.3	U
1,3,5-Trimethylbenzene	BDL	0.3	U
tert-Butylbenzene	BDL	0.3	U
1,2,4-Trimethylbenzene	BDL	0.3	U
sec-Butylbenzene	BDL	0.3	U
p-Isopropyltoluene	BDL	0.3	U
1,3-Dichlorobenzene	BDL	0.3	U
1,4-Dichlorobenzene	BDL	0.3	U

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ANALYTICAL REPORT

To: Techalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday December 31st, 1990

RE: [redacted]
Project # 1986-06-01-0000
Lab ID: 9012G351-002
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,1-Dichloropropene	BDL	0.2	U
Bromodichloromethane	BDL	0.2	U
Dibromomethane	BDL	0.4	U
1,2-Dichloropropane	BDL	0.9	U
Trichloroethene	BDL	0.6	U
Dibromochloromethane	BDL	0.2	U
1,2-Dibromoethane	BDL	0.2	U
1,1,2-Trichloroethane	BDL	0.2	U
Benzene	BDL	0.2	U
1,3-Dichloropropane	BDL	0.2	U
Bromoform	BDL	0.3	U
Tetrachloroethene	BDL	0.1	U
1,1,2,2-Tetrachloroethane	BDL	0.4	U
Toluene	BDL	0.2	U
Chlorobenzene	BDL	0.2	U
1,1,1,2-Tetrachlorethane	BDL	0.2	U
Ethylbenzene	BDL	0.2	U

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Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: **9012G351-002**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

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Attn: Mr. Jack Thorsen

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: 9012G351-002
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,2-Dichlorobenzene	BDL	0.3	U
n-Butylbenzene	BDL	0.3	U
1,2-Dibromo-3-Chloropropane	BDL	0.6	U
1,2,4-Trichlorobenzene	BDL	0.5	U
Hexachlorobutadiene	BDL	0.5	U
Naphthalene	BDL	0.4	U
1,2,3-Trichlorobenzene	BDL	0.7	U
cis-1,3-Dichloropropene	BDL	0.2	U
trans-1,3-Dichloropropene	BDL	0.2	U

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ANALYTICAL REPORT

To: **Techalloy**
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: **Mr. Jack Thorsen**

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: **9012G351-003**
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,1-Dichloropropene	BDL	0.2	U
Bromodichloromethane	BDL	0.2	U
Dibromomethane	BDL	0.4	U
1,2-Dichloropropane	BDL	0.9	U
Trichloroethene	BDL	0.6	U
Dibromochloromethane	BDL	0.2	U
1,2-Dibromoethane	BDL	0.2	U
1,1,2-Trichloroethane	BDL	0.2	U
Benzene	BDL	0.2	U
1,3-Dichloropropane	BDL	0.2	U
Bromoform	BDL	0.3	U
Tetrachloroethene	BDL	0.1	U
1,1,2,2-Tetrachloroethane	BDL	0.4	U
Toluene	BDL	0.2	U
Chlorobenzene	BDL	0.2	U
1,1,1,2-Tetrachlorethane	BDL	0.2	U
Ethylbenzene	BDL	0.2	U

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Techalloy
Roy F. Weston, Incorporated
3 Hawthorn Parkway, Suite 400
Vernon Hills, IL 60061

Attn: Mr. Jack Thorsen

Date: Monday December 31st, 1990

RE: Non-responsive
Project # 1986-06-01-0000
Lab ID: 9012G351-003
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Dichlorodifluoromethane	BDL	0.2	U
Chloromethane	BDL	0.2	U
Bromomethane	BDL	0.1	U
Vinyl Chloride	BDL	0.2	U
Chloroethane	BDL	0.1	U
Methylene Chloride	BDL	0.8	U
Trichlorofluoromethane	BDL	0.5	U
1,1-Dichloroethene	BDL	0.2	U
1,1-Dichloroethane	BDL	0.3	U
cis-1,2-Dichloroethene	BDL	0.3	U
2,2-Dichloropropane	BDL	0.3	U
trans-1,2-Dichloroethene	BDL	0.2	U
Chloroform	BDL	0.3	U
Bromochloromethane	BDL	0.3	U
1,2-Dichloroethane	BDL	0.3	U
1,1,1-Trichloroethane	BDL	0.2	U
Carbon Tetrachloride	BDL	0.1	U

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Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
1,2-Dichlorobenzene	BDL	0.3	U
n-Butylbenzene	BDL	0.3	U
1,2-Dibromo-3-Chloropropane	BDL	0.6	U
1,2,4-Trichlorobenzene	BDL	0.5	U
Hexachlorobutadiene	BDL	0.5	U
Naphthalene	BDL	0.4	U
1,2,3-Trichlorobenzene	BDL	0.7	U
cis-1,3-Dichloropropene	BDL	0.2	U
trans-1,3-Dichloropropene	BDL	0.2	U

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Lab ID: 9012G351-003
Sample Date: 12/21/90
Date Received: 12/21/90
Units: UG/L

VOLATILES BY GC/MS, METHOD 524 LIST

Volatile Compound	Result	Reporting Limit	Flag
Styrene	BDL	0.8	U
p-Xylene	BDL	0.2	U
m-Xylene	BDL	0.2	U
o-Xylene	BDL	0.4	U
Bromobenzene	BDL	0.3	U
1,2,3-Trichloropropane	BDL	0.4	U
Isopropylbenzene	BDL	0.3	U
n-Propylbenzene	BDL	0.3	U
2-Chlorotoluene	BDL	0.3	U
4-Chlorotoluene	BDL	0.3	U
1,3,5-Trimethylbenzene	BDL	0.3	U
tert-Butylbenzene	BDL	0.3	U
1,2,4-Trimethylbenzene	BDL	0.3	U
sec-Butylbenzene	BDL	0.3	U
p-Isopropyltoluene	BDL	0.3	U
1,3-Dichlorobenzene	BDL	0.3	U
1,4-Dichlorobenzene	BDL	0.3	U

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Date Received: 12/21/90
Units: UG/L

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (312) 534-5200 (219) 885-7077 (815) 723-7533

DATA QUALIFIERS

u - Indicates an inorganic compound was analyzed for but not detected.

U - Indicates an organic compound was analyzed for but not detected.

J - Indicates an estimated value for either a TIC or an analyte that meets the identification criteria but the result is less than the specified detection limit.

B - Indicates the compound was found in the blank and the sample.

T - Indicates the compound was found in the TCLP extraction blank and the sample.

E - Concentrations exceed calibration range of the instrument.

I - Indicates Interference.

BS - Indicates matrix analyses were conducted on reagent grade water.

BSD - Blank Spike Duplicate

BDL - Below Detection Limit

MS - Matrix Spike

MSD - Matrix Spike Duplicate

D - Indicates that surrogate/matrix spike recoveries were not obtained because the extract had to be diluted for analysis.

DL - Indicates a secondary dilution

NA - Not Applicable

DF - Dilution factor

X - Result is by calculation

NOTES:

Solid, sediment and sludge results are reported on a dry weight basis except when analyzed for Landfill disposal parameters (such as incineration or Illinois Green Sheet parameters). All other mg/kg results are reported on an "as received" basis.

Reporting limits are detection limits adjusted for sample size used, dilutions made, and in the case of dry weight results, the moisture content of the sample.

Revised 02/07/90

Custody Transfer Record/Lab Work Request

WESTON

WESTON Analytics Use Only
90066193

Client TECHALLOY CO. INC.
Work Order
Date Rec'd. Date Due
RFW Contact
Client Contact/Phone LARRY WIDELL 923-2131

Refrigerator#	08G-CL02										
#/Type Container	2-40ML										
Containers/Volume	40 ML										
Preservative	NONE										
ANALYSES REQUESTED →											

WA Use Only Lab ID	Client ID/Description	Matrix	Date Collected										
002	R502 230FT. WELL	W	6-8-90										

Matrix:
S - Soil
SE - Sediment
SO - Solid
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
F - Fish
X - Other

Special Instructions:

Item/Reason	Relinquished by	Received by	Date	Time
		T. Spradley	6/11/90	1500

Item/Reason	Relinquished by	Received by	Date	Time

WESTON Analytics Use Only

Samples Were:
1 Shipped or Hand-Delivered
NOTES:

2 Ambient or Chilled
NOTES:

3 Received Broken/Leaking (Improperly Sealed)
Y N
NOTES:

4 Properly Preserved
Y N
NOTES:

5 Received Within Holding Times
Y N
NOTES:

COC Tape Was:
1 Present on Outer Package Y N
2 Unbroken on Outer Package Y N
3 Present on Sample Y N
4 Unbroken on Sample Y N
NOTES:

COC Record Was:
1 Present Upon Receipt of Samples Y N

Discrepancies Between Sample Labels and COC Record? Y N
NOTES:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF:

5HR-12

March 25, 1991

Mr. George Miller
Maintenance Superintendent
Techalloy Illinois, Inc.
P.O. Box 423
Union, IL 60180

Re: Visual Site Inspection
Techalloy Illinois, Inc.
ILD 005 178 975

Dear Mr. Miller:

The United States Environmental Protection Agency (U.S. EPA) Region V will conduct a Preliminary Assessment and Visual Site Inspection (PA/VSI) at the referenced facility. This inspection is conducted pursuant to the Resource Conservation and Recovery Act, as amended (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA). The PA/VSI requires identification and systematic review of all solid waste streams at the facility. The objective of the PA/VSI is to determine whether or not releases of hazardous wastes or hazardous constituents have occurred or are occurring at the facility which may require further investigation. This analysis will also provide information to establish priorities for addressing any confirmed releases.

The visual site inspection of your facility is to verify the location of all solid waste management units (SWMUs) and areas of concern to make a cursory determination of their condition by visual observation. The VSI supplements and updates data gathered during a preliminary file review. During this site inspection, no samples will be taken. A sampling visit to ascertain if releases of hazardous waste or constituents have occurred may be required at a later date.

Assistance of some of your personnel may be required in reviewing solid waste flow(s) or previous disposal practices. The site inspection is to provide a technical understanding of the present and past waste flows and handling, treatment, storage, and disposal practices. Photographs of the facility are necessary to document the condition of units at the facility and the waste management practices used.

The VSI has been scheduled for April 3, 1991. The inspection team will consist of Michael Gorman and William Dytrych of Resource Applications, Inc., contractors for the U.S. EPA.

Representatives of the Illinois Environmental Protection Agency may also be present. Your cooperation in admitting and assisting them while on site is appreciated.

The U.S. EPA recommends that personnel who are familiar with present and past manufacturing and waste management activities be available during the VSI. Access to any relevant maps, diagrams, hydrogeologic reports, environmental assessment reports, sampling data sheets, manifests and/or correspondence is also necessary, as such information is needed to complete the PA/VSI. Enclosed is a summary of our current knowledge and data gaps.

If you have any questions, please contact me at (312) 886-4448 or Sheri Bianchin at (312) 886-4446. A copy of the Preliminary Assessment/Visual Site Inspection Report, excluding the conclusions portion may be made available upon request.

Sincerely yours,

Kevin M. Pierard, Chief
OH/MN Technical Enforcement Section

Enclosure

cc: Tina Kovasznay, IEPA - Maywood
Larry Eastep, IEPA - Land Pollution Control Division

ATTACHMENT

Techalloy Illinos, Inc.
P.O. Box 423
Union, Illinois 60180

PROBABLE SOLID WASTE MANAGEMENT UNITS (SWMUs)

1. Little information was available to compile a list of solid waste management units at your facility. The only units I know of are the two undergoing closure. Please list all additional waste management units currently active at your facility. If possible, please provide as complete information for the waste unit in response to the questions below.

From the list of probable SWMUs please address the following questions:

- Do the above SWMUs still exist at the facility and are they in operation?
- What are the start-up and closure dates of the above SWMUs?
- What types of wastes are the SWMUs currently/formerly used for?
- Name any SWMUs at your facility that have not been listed above. These would include hazardous waste storage areas, treatment units, or any other area or system at your facility dealing with hazardous waste.

2. Please supply as much information as possible concerning the site history. This would include any information you have regarding any other owner/operators at this location.

3. Please provide a description of the primary processes taking place at your facility and the waste streams which are generated.

4. Describe the methods of treatment and disposal of generated waste utilized by your facility.

If available, the following items are requested:

- A detailed map of the facility showing the location of the SWMUs and production stations.
- Flow diagrams showing waste streams and waste management practices.

ATTACHMENT

Techalloy Illinos, Inc.
P.O. Box 423
Union, Illinois 60180

PROBABLE SOLID WASTE MANAGEMENT UNITS (SWMUs)

1. Drum Storage Area: A 28' X 46' paved and fenced area used to accumulate 55-gallon drums of both hazardous and non-hazardous waste, including paint wastes, dirty paint solvents, dirty trichloroethylene, spent methylene chloride, and spent caustic potash.

2. Treatment Tanks: Located within an 8' X 8' area inside the plant, and using paint solvents, methylene chloride, trichloroethylene and caustic potash.

3. Spent-solvent recycling still: Process-contaminated trichloroethylene (TCE) is recycled into reusable TCE and still bottoms.

From the list of probable SWMUs please address the following questions:

- Do the above SWMUs still exist at the facility and are they in operation?

- What are the start-up and closure dates of the above SWMUs?

- What types of wastes are the SWMUs currently/formerly used for?

- Name any SWMUs at your facility that have not been listed above. These would include hazardous waste storage areas, treatment units, or any other area or system at your facility dealing with hazardous waste.

2. Please supply as much information as possible concerning the site history. This would include any information you have regarding any other owner/operators at this location.

3. Please provide a description of the primary processes taking place at your facility and the waste streams which are generated.

4. Describe the methods of treatment and disposal of generated waste utilized by your facility.

ei tech trip. 128
021

To: File

FROM: William Buller, Project Coordinator
Techalloy Company, Inc.
ILD 005 178 975

SUBJECT: Trip Report
Union, Illinois

On December 10, 1998 I traveled to Union, Illinois to observe an aquifer test to evaluate the upgraded groundwater recovery system for the Techalloy Company corrective action cleanup site. Specifically, the purpose of the test was to define the aquifer properties at the site as reflected at the recently installed extraction well, EW-2. EW-2 is located about 800 feet southwest of EW-1. Two additional piezometers have also been installed at the site; P-3 is located 50 feet from EW-2, and P-4 is located 100 feet from P-4.

I arrived on the site at 10 am while workers were preparing for the aquifer test. I met with Eric Chatterson and Rick Swearingen of Weston Engineers to discuss the aquifer test. Scott Carr of Techalloy provided a tour of the groundwater treatment system. To expand the capacity of the treatment system, a horizontal air stripper consisting of about 5 aereating layers was installed within the treatment building. The horizontal stripper works in tandem with the previously installed stripping tower located outside the building. The treated water is discharged to the South Branch of the Kishwaukee River.

The test was started at 12:15 pm with EW-2 pumped at 404 gpm as indicated by the gage at the groundwater treatment plant. EW-1 was not pumped. After about one-half hour of operation it was determined that the transducer in P-4, which senses the water level in the piezometer, was not working properly. The test was stopped and the transducer was cleaned.

The test was restarted at 2;15 pm with EW-2 again pumped at 404 gpm. At 3:30 pm the data logger indicated that drawdown in P-2 was 0.225 feet and 0 feet at P-4. I left the site at 3:50 pm.

The early test indicates that the aquifer is highly conductive at this point.

PRC Environmental Management, Inc.
233 North Michigan Avenue
Suite 1621
Chicago, IL 60601
312-856-8700
Fax 312-938-0118

PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

TECHALLOY ILLINOIS, INC.
UNION, ILLINOIS
ILD 005 178 975

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

Work Assignment No.	:	C05087
EPA Region	:	5
Site No.	:	ILD 005 178 975
Date Prepared	:	November 8, 1991
Contract No.	:	68-W9-0006
PRC No.	:	009-C05087-IL 25
Prepared by	:	Resource Applications, Inc.
Principal Investigator	:	Michael W. Gorman
Telephone No.	:	(312) 332-2230
EPA Work Assignment Manager	:	Kevin Pierard
Telephone No.	:	(312) 886-4448

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EXECUTIVE SUMMARY

Resource Applications, Inc. (RAI), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Techalloy Illinois, Inc. (Techalloy) facility in Union, Illinois. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities.

Techalloy transforms steel rod into copper, nickel, and molybdenum disulfide-coated wire. The facility covers 34 acres and has been in operation since 1960. Techalloy is currently classified as both a generator and a treatment/storage/disposal facility. After closure of the Hazardous Wastewater Treatment Facility and the Copper Cyanide Waste Destruction Unit, they will be classified as a generator only. The primary wastes generated at Techalloy are spent acids and spent pickling rinse waters. All wastes are removed directly from the processes and treated off-site. The facility is surrounded by a chain link fence. Gates are open during business hours, so public access is possible. However, Techalloy has a closed-circuit television monitoring system to constantly view the entire facility.

The PA/VSI identified the following seven SWMUs and one AOC at the facility:

Solid Waste Management Units

1. Hazardous Wastewater Treatment Facility
2. Wire Slag Disposal Area
3. Copper Cyanide Waste Destruction Unit
4. BG-5 Oil Drums
5. Concrete Evaporation Pad
6. Spent Acid Holding Pond
7. Plating Wastewater Disposal Area

Areas of Concern

1. Acid Tank Room (Pickle House)

At the Techalloy facility, there has been a release of hazardous material to the soil and ground water. The nature of wastes produced and location of nearest surface water (0.5 mile) keep a potential release to air and surface water minimal. The Copper Cyanide Waste Destruction Unit, currently undergoing RCRA closure, has not operated since 1985. The Concrete Evaporation Pad and the Plating

Waste Disposal Area have not been used since 1978 and the Spent Acid Holding Pond since 1979. Even though these units no longer operate, they still pose a threat of release to ground water. The Spent Acid Holding Pond is unlined, so there is a high possibility that waste disposed of in this unit would enter the soil and ground water. The Plating Waste Disposal Area is flat, bare soil. Every time the waste cyanide was discharged here, it entered the soil and there is a high possibility that it entered the ground water. Spent solvents at Techalloy were evaporated on the Concrete Evaporation Pad, which is a flat concrete slab. There was no way to prevent the spent solvents from running off the slab and entering the soil and ground water. The Copper Cyanide Waste Destruction Unit is a tanker truck resting directly above the soil with no secondary containment. Any release would immediately enter the soil and possibly the ground water. There is no secondary containment around the BG-5 Oil Drums. If a release were to occur, the waste oil could enter the soil and ground water, if not contained. The amount of oil would be small, but the potential does exist.

Techalloy is currently under investigation by the Illinois Environmental Protection Agency (IEPA) for possibly contaminating Union's ground water supply. Ground water is at a depth of 90 feet from the present surface and flows in a northwesterly direction. The contaminated area is northwest of Techalloy. The final results from this investigation are pending. Results from soil samples taken around the Copper Cyanide Waste Destruction Unit and concrete borings taken from the Hazardous Waste Treatment Facility are also pending. According the George Miller, Maintenance Superintendent at Techalloy, soil samples were taken at the Spent Acid Holding Pond, Concrete Evaporation Pad, and Plating Waste Disposal Area; however, after diligent effort, RAI could not obtain the results of the sampling. RAI recommends contacting John W. Thorsen of Roy F. Weston, Inc. at (708/918-4102) to obtain results from samples taken.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC) received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 member, provided the necessary assistance to complete the PA/VSI activities for Techalloy Illinois, Inc. (Techalloy).

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid waste have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells

- Closed and abandoned units

- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units

- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm operational, SWMU, AOC, and release information obtained during the PA.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Techalloy facility in Union, Illinois.

The PA was completed on April 2, 1991. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, release history, regulatory history, environmental setting, and receptors.

2.1 FACILITY LOCATION

Techalloy is located at the intersection of Olson and Jefferson Roads in Union, Illinois (Figure 1). Union is a small farming community in McHenry County, approximately 25 miles east of Rockford, Illinois at latitude 42° 14' 22" north and longitude 88° 32' 22" west (Techalloy, 1980b). The facility covers 34 acres, with the plant occupying five acres.

2.2 FACILITY OPERATIONS

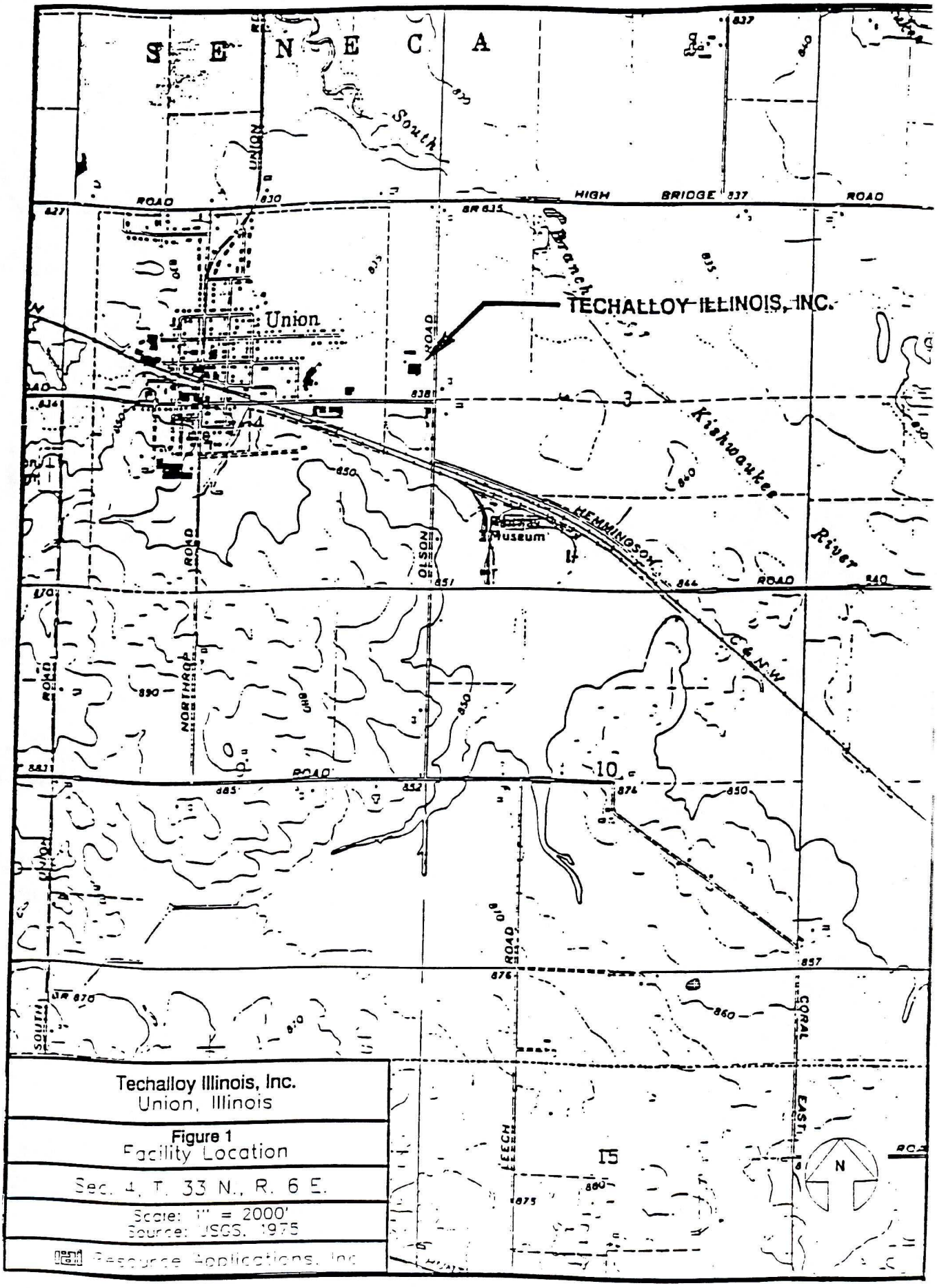
Techalloy began operations in 1960 and has been the only facility owner. Before Techalloy started operations, the site was farmland. Depending on the volume of production, Techalloy employs two or three shifts of workers totalling about 75 people (Miller, 1991b).

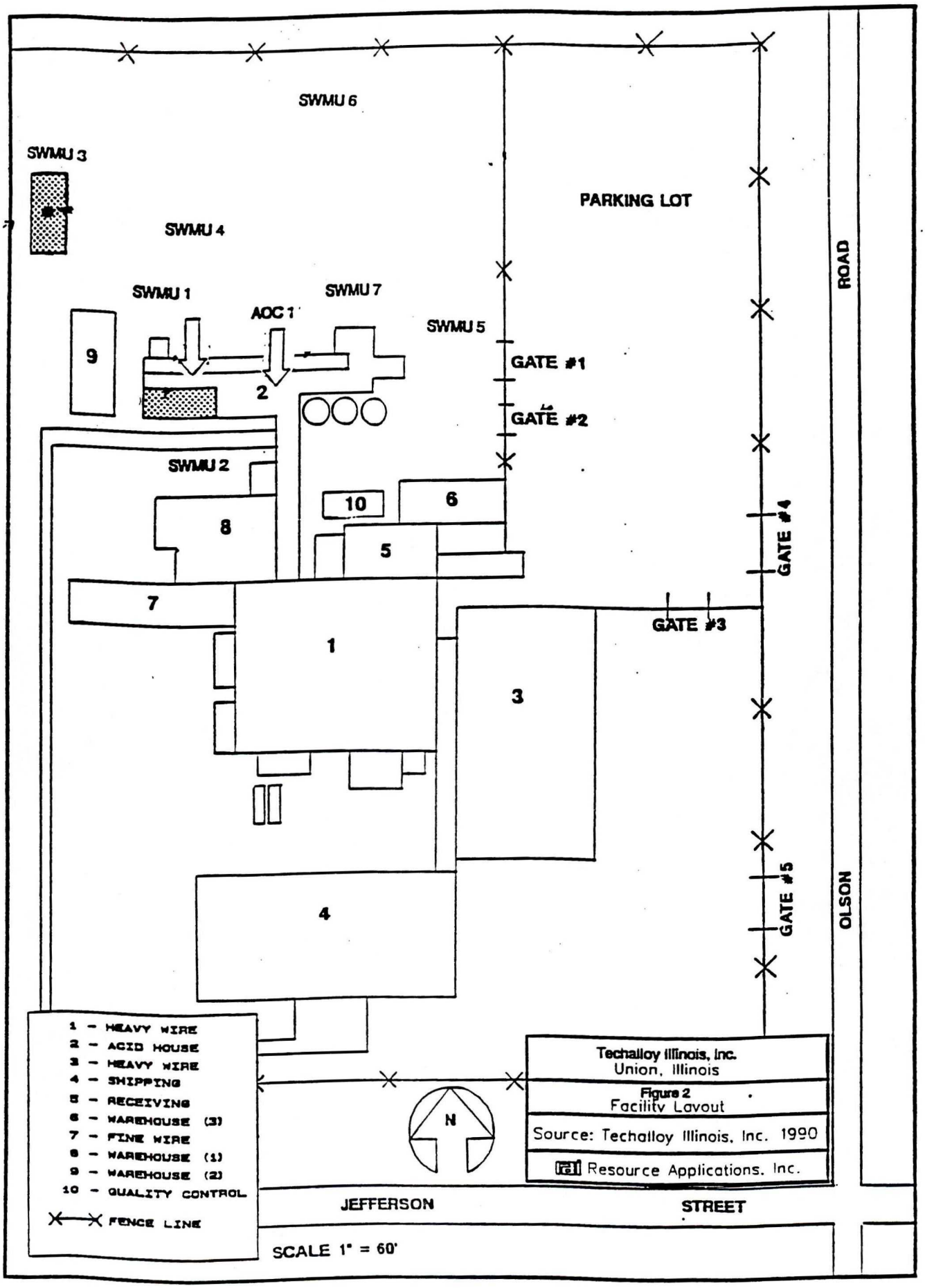
Techalloy transforms stainless steel rod into copper-, nickel-, and molybdenum disulfide-coated wire of different strengths and diameters. Depending on the type of wire specified by the customer, the process will vary. Various cleaners (acidic and caustic), dyes, and rinses are used in the process. The wire is initially lubricated in tanks of sodium sulfate (WKLS) and borate salts (SP-6). The wire is then cleaned in a bath of ammonium bifluoride before proceeding to the acid tank room (pickling house). The wire is then placed in a series of tanks (potassium permanganate, ammonium bifluoride (ADS) nitric acid, sodium hydroxide (LRS), and sulfuric acid) to remove scale build-up (Figure 3). The wire then proceeds to the copper cyanide and nickel sulfate plating tanks.

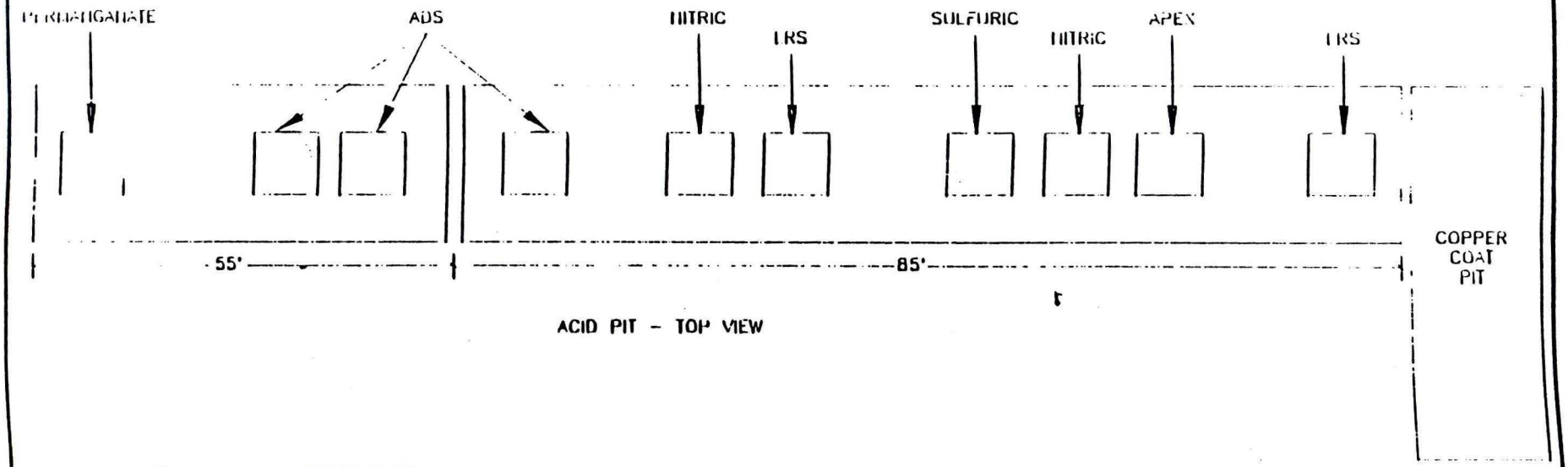
Currently, wastes from all operating units at the facility are removed directly from the various processes and transported off-site for treatment. Facility SWMUs are listed in Table 1 and shown in Figure 3. From 1960 to 1980, the spent pickle liquor was evaporated in an unlined holding pond. Between 1980 and 1988, the waste was treated at the in-house treatment facility (Figure 4). Since 1988, the waste has been transported off-site for treatment. From 1968 to 1979, the copper cyanide and nickel sulfate plating wastes were discharged on the ground behind the facility. From 1980 to 1988, these wastes were treated at the in-house treatment facility. Since 1988, the unit has been a closed-

loopsystem with no waste generated. From 1968 to 1978, spent 1,1,1-trichloroethane (1,1,1-TCA) and 1,1,2-trichloroethane (1,1,2-TCA), were treated by evaporation on a concrete pad. Since 1978, Techalloy has not used any TCA. The WKLS, SP-6, and ammonium bifluoride wastes have always been removed directly from the processes (Techalloy, 1986).

The Techalloy facility receives its' water supply from three wells located on site.

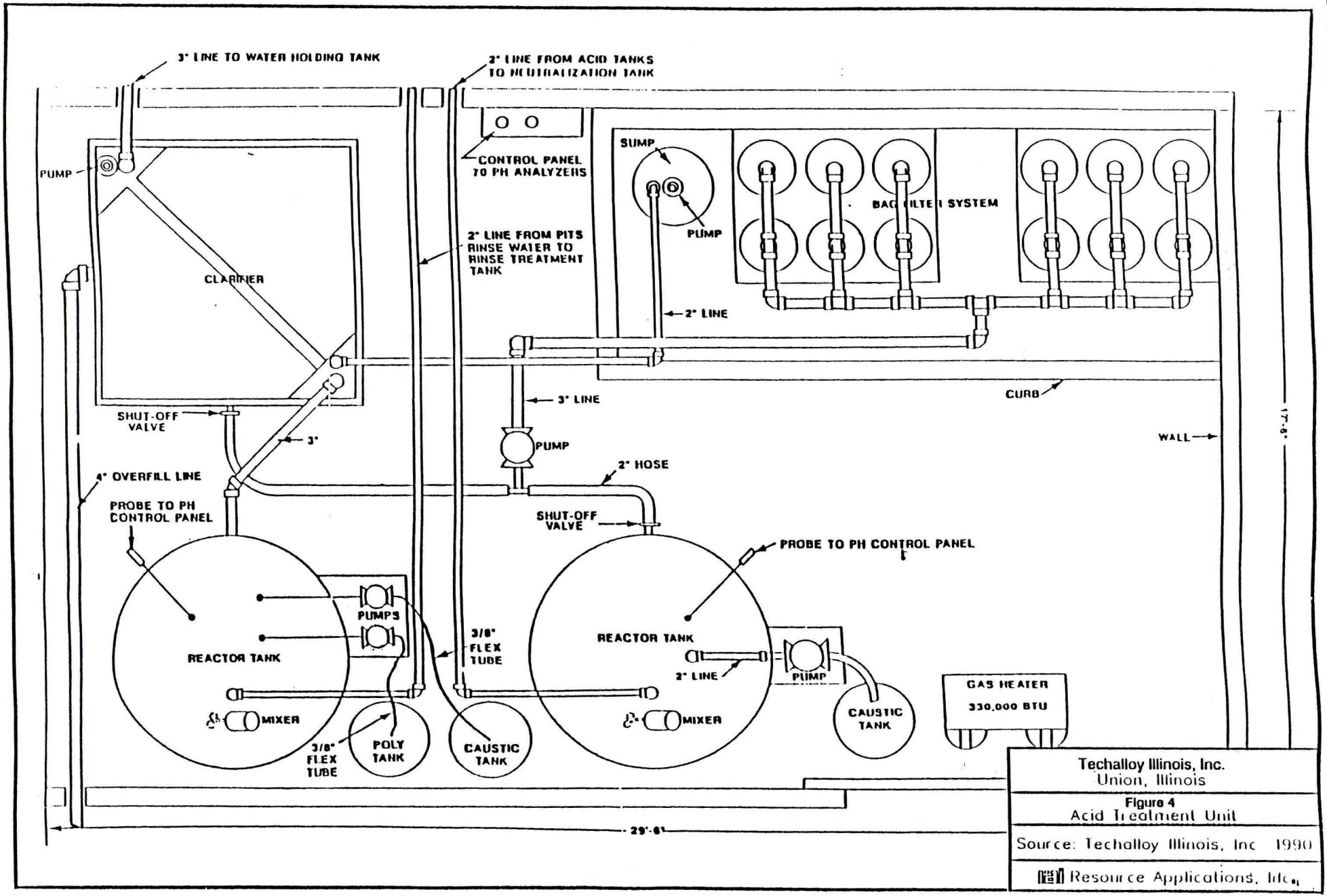

SENECA
TECHALLOY ILLINOIS, INC.
Union
Techalloy Illinois, Inc.
Union, Illinois
Figure 1
Facility Location
Sec. 4, T. 33 N., R. 6 E.
Scale: 1" = 2000'
Source: USGS, 1975
Resource Applications, Inc.


SWMU 6
SWMU 3
SWMU 4
PARKING LOT
ROAD
SWMU 1
SWMU 7
AOC 1
SWMU 5
9
2
GATE #1
GATE #2
SWMU 2
10
6
8
5
GATE #4
7
1
GATE #3
3
4
GATE #5
OLSON
1 - HEAVY WIRE
2 - ACID HOUSE
3 - HEAVY WIRE
4 - SHIPPING
5 - RECEIVING
6 - WAREHOUSE (3)
7 - FINE WIRE
8 - WAREHOUSE (1)
9 - WAREHOUSE (2)
10 - QUALITY CONTROL
FENCE LINE
N
Techalloy Illinois, Inc.
Union, Illinois
Figure 2
Facility Layout
Source: Techalloy Illinois, Inc. 1990
Resource Applications, Inc.
JEFFERSON
STREET
SCALE 1" = 60'



ACID PIT – TOP VIEW

Techalloy Illinois, Inc. Union, Illinois
Figure 3 Acid House
Source: Techalloy Illinois, Inc 1990
Resource Applications Inc



Techalloy Illinois, Inc.
Union, Illinois

Figure 4
Acid Treatment Unit

Source: Techalloy Illinois, Inc 1990

Resource Applications, Inc.

TABLE 1

SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Hazardous Wastewater Treatment Facility	No	Inactive, currently undergoing RCRA Closure
2	Wire Slag Disposal Area	No	Active
3	Copper Cyanide Waste Destruction Unit	No	Inactive, currently undergoing RCRA closure
4	BG-5 Oil Drums	No	Active
5	Concrete Evaporation Pad	No	Inactive, unit abandoned
6	Spent Acid Holding Pond	No	Inactive, unit abandoned
7	Plating Wastewater Disposal Area	No	Inactive, unit abandoned

Note:

* A RCRA hazardous waste management unit is one that currently requires a RCRA permit.

2.3 WASTE-GENERATING PROCESSES

Hazardous wastes are generated in two areas of the facility (Table 2). Spent acids (D002, D007) are generated from the pickling baths that remove scale from the wire. The acids (nitric, sulfuric, hydrofluoric, and muriatic) are generated at a rate of approximately 3,000 gallons one-to-three times per month. The waste is removed directly from the process and shipped to Envirite Corp. in Harvey, Illinois for treatment (Techalloy, 1986).

The pickling rinse water (D002, D007) is generated by rinsing wire between acid baths. Approximately 5,000 gallons are generated one-to-three times per month. The waste is removed directly from the process and shipped to Clean Harbors, Inc. of Chicago. for treatment (Techalloy, 1986). At the time of the VSI, RAI did not observe any waste on site.

In the process of cleaning the rinsate tanks, ADS sludge (D002, D007) is generated at a rate of 605 gallons every two months. The waste is accumulated in drums and sent to Clean Harbors of Chicago, Inc. for treatment (Techalloy, 1986). At the time of the VSI, RAI did not observe any waste on site.

Used plating filters (D003, D008) are generated from changing filters in the plating tanks. The filters are generated at a rate of 110 gallons per year and shipped to Cyanokem, Inc. in Detroit, Michigan (Techalloy, 1986). At the time of the VSI, RAI did not observe any waste on site.

SP-6 sludge, a non-hazardous waste, is generated from the cleaning of the lubricant tanks. The waste is generated at a rate of 165 gallons every two-to-three years and is shipped to Clean Harbors of Chicago, Inc. for treatment (Techalloy, 1986). At the time of the VSI, RAI did not observe any waste on site.

Approximately 2,585 gallons per year of high viscosity waste oil are generated in the wire-drawing process. The waste is sent to Clean Harbors of Braintree, Inc., Braintree, MA for incineration. At the time of the VSI, RAI did not observe any waste on site. Approximately 275 gallons per year of water-soluble waste oil is generated from cooling dies in machines. The waste is sent to Clean Harbors of Chicago, Inc. for treatment. At the time of the VSI, RAI did not observe any waste on site. General vehicle and machinery maintenance creates about 1,430 gallons per year of waste crankcase oil. The waste is sent to American Chemical Service in Griffith, Indiana (Techalloy, 1986). At the time of the VSI, RAI did not observe any waste on site.

TABLE 2

SOLID WASTES

Waste/EPA Waste Code	Source	Primary Management Unit*
Spent Acids / D002, D007	Pickling Baths	See note below
Rinse Water / D002	Pickling Baths	See note below
ADS Sludge / D002	Rinse Tanks	See note below
Plating Filters / D003	Plating Tanks	See note below
SP-6 Sludge	Production Process	See note below
Waste Oils	Production Process	SWMU No. 4

Note:

* Primary management unit refers to a SWMU that currently manages the waste. These wastes are removed directly from the processes and treated off-site.

2.4 RELEASE HISTORY

In October 1990, Roy F. Weston, Inc. (Weston) conducted ground water sampling at the Techalloy facility (Figure 5). The results revealed that the ground water is contaminated with volatile organic compounds (VOCs). Excessive levels of 1,1,1-TCA were discovered in Monitoring wells 4,5,7 and HBR. The results conclude that the contaminated plume is moving off-site in a northwesterly direction (IEPA, 1991c). Between 1968 and 1978, 1,1,1-TCA and 1,1,2-TCA were used as a degreasers. The spent solvents were treated by volatilization on an outdoor concrete pad. It has not been documented, but it is possible that the waste spilled over the side of the pad, causing the contamination.

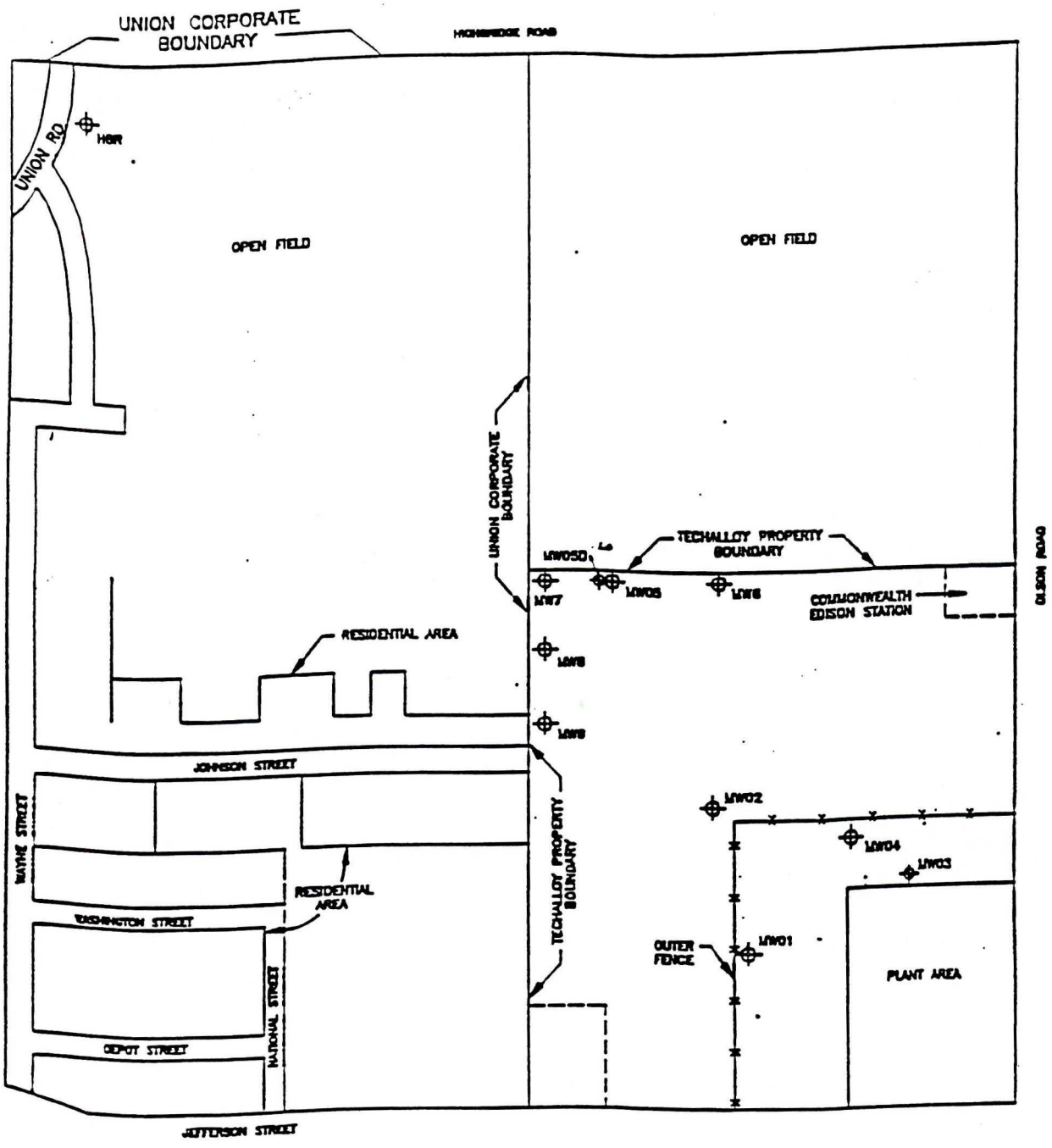
In 1987, Union's public water well No. 3 was taken out of service due to excessive levels of ammonia, sulfates, chlorides, sodium, and potassium (IEPA, 1991b). The well is located approximately 2,900 feet northwest of Techalloy at a depth of 80 feet. The exact source is not known, but Techalloy and Southern California Chemical Co. are the suspected sources (IEPA, 1991b).

In June 1985, two cracks were discovered in the containing wall of the pickling tanks. According to George Miller, Maintenance Superintendent at Techalloy, a release to the soil did occur, but the exact quantity was not known (Miller, 1991b). Soil samples were not taken to determine the exact amount of the release. The cracks were repaired with cement and epoxy.

Between 1968 and 1978, rinse waters from the nickel and copper cyanide plating tanks were discharged on the ground, north of the pickling house (IEPA, 1991b).

2.5 REGULATORY HISTORY

Techalloy filed a Notification of Hazardous Waste Activity for SWMUs No. 1 and No. 3, designating the company as a generator and treatment/storage/disposal (TSD) facility on August 15, 1980 (Techalloy, 1980a). Their Part A permit application was filed on November 11, 1980 stating that 800,000 pounds of K063 waste was generated per year (T01) (Techalloy, 1980b). On December 2, 1985, the permit and notification forms were revised. The purpose was to change misrepresented K063 waste to K062 waste (S02,T01), and add F001 and D003 waste (T01) (Techalloy, 1985a,b). The notification and permit were re-submitted on January 18, 1988 to add F006 and D002 waste (T01) and change the process code on the D003 waste to (T04) (Techalloy, 1988 a,b). The most recent documents, filed in December 1990, added F008 waste and listed D002 at an annual production of 3,187,000 pounds (S02) (Techalloy, 1990a,b).



Techalloy Illinois, Inc. Union, Illinois
Figure 5 Location of Monitoring Wells
Scale 1" = 400' Source: Weston, 1990 b
Resource Applications, Inc.

Over the past nine years, IEPA has conducted several investigations into Techalloy's waste management practices. On April 21, 1982 an IEPA inspection found that Techalloy did not have a written waste analysis plan and did not have a written description of necessary training for facility personnel (IEPA, 1982). A July 15, 1985 IEPA inspection revealed several violations. The facility lacked a complete waste analysis plan, operator inspections, training records, a contingency plan and operating record. Also, waste containers were not labeled and the Part A permit did not include all the waste activity at the facility. All violations were corrected by February 14, 1986 (IEPA, 1986b). An inspection conducted on January 18, 1988 by IEPA cited Techalloy again for an incomplete waste analysis plan and an improper process code on their Part A permit. These violations were resolved on May 27, 1988 (IEPA, 1988). A March 22, 1990 IEPA inspection found that Techalloy failed to correctly identify waste, properly label waste containers and provide written assessments of system integrity for the wastewater treatment and pickling rinse tanks. All issues were resolved on May 30, 1990 (IEPA, 1990).

Techalloy has a permit to operate air pollution control equipment to control emissions at seven annealing furnaces and 15 acid cleaning tanks. The permit states that emissions of particulate matter shall not exceed 0.1 ton per year (IEPA, 1986a). There have been no reported violations of the permit. The facility does not have a NPDES permit and does not discharge to surface waters.

Weston, representing Techalloy, submitted a RCRA closure plan for the Copper Cyanide Waste Destruction Unit and the Hazardous Wastewater Treatment Facility on December 7, 1990 (Weston, 1990). The closure plan was approved by IEPA on February 8, 1991, and the units are required to be closed by August 15, 1991 (IEPA, 1991a).

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Techalloy facility.

2.6.1 Climate

Union, IL is located in southeast McHenry County, just over four miles southeast of the National Weather Service office in Marengo, IL. With no significant topographical barriers to airflow, the climate in the site locale is typically continental with cold winters, warm summers, and frequent short-period fluctuations in temperature, humidity, cloudiness and wind direction. The average daily

temperature throughout the year is 47.8°F. In winter, the average temperature is 22.5°F and the average daily minimum is 13.8°F. In summer, the average temperature is 70.6°F and the average daily maximum is 82.9°F.

Average annual net precipitation is 5.71 inches. Approximately 15 percent of the annual total falls as snow in the winter months. During the fall, winter and spring, the pattern of precipitation tends to be more uniform over both time and distance, whereas in the summer, rainfall is often locally heavy and variable. The 1-year, 24-hour maximum rainfall recorded at the Marengo station over the 1951-80 period was 4.07 inches (Ruffner, 1985).

2.6.2 Floodplain and Surface Water

The facility, at an elevation of approximately 835 feet, is located about 125 feet beyond the eastern corporate boundary of the village of Union. The eastern portion of the village is classified as a zone C floodplain area, that is, an area of minimal flooding (FEMA, 1983). Approximately one-half mile northeast of the facility is the South Branch of the Kishwaukee River. The banks of the South Branch at that point are at an elevation of 830 feet (USGS, 1977). The South Branch flows from the southeast to the northwest and joins the Kishwaukee River two and one-half miles downstream from the facility.

2.6.3 Geology and Soils

Surface features in northeastern Illinois are largely the result of glaciation and almost completely cover the underlying bedrock surface (Willman, 1971). The facility is located on the north side at the base of a northwest-southeast trending ridge (USGS, 1977). The southern two-thirds of the facility is underlain by soil designated Warsaw loam, 2 to 5 percent slopes, while the northern one-third is underlain by Will loam soil. The former is a gently sloping, well-drained soil found on terrace flats and convex side slopes of gravelly kames and eskers on uplands. On average, this Warsaw loam is five feet thick. The upper three feet has both a moderate permeability and a moderate available water capacity. In the lower portion of this soil, permeability is very rapid and the available water capacity is very low. The Will loam is a nearly level or depressional, poorly drained soil on stream terraces. In spring, it is subject to occasional flooding for brief periods. Permeability in the upper half of this typically five-foot thick soil is moderate, and the available moisture capacity in this section is also moderate. The lower half of the typical Will soil has a rapid permeability and a very low available water capacity (USDA, 1980).

In the vicinity of the site, the glacial deposits are approximately 185 feet thick and consist primarily of sandy, silty till with occasional lenses of fine-grained sand. Directly beneath the till deposits are upper and middle Ordovician shales and dolomites. These bedrock formations extend approximately 400 feet to the upper contact of the Glenwood and St. Peter Sandstone Formations, collectively one of the two major deep bedrock aquifer systems in the Chicago area. The base of the Cambrian is in contact with the crystalline pre-Cambrian basement at an inferred depth of 2,800 feet (Willman, 1971).

2.6.4 Ground Water

Ground water is obtained from four major aquifer systems in northeastern Illinois -- the glacial drift system, the shallow bedrock aquifer system, and two deep bedrock aquifer systems (Hughes et al., 1966). At the site, three wells, one at 80 feet depth and two at 180 feet depth, pump ground water from the glacial drift system. These wells provide all manufacturing and sanitary water demands of the facility (Miller, 1991a). The glacial drift aquifer is recharged locally from precipitation. The absence of an appreciable thickness of water-yielding Silurian dolomite in the site locale, owing to the eastward dip of bedrock units at 10 to 15 feet per mile in northeastern Illinois, minimizes the possible contribution of the shallow bedrock aquifer system. Consequently, the deep bedrock aquifer systems are the most important ground water aquifer systems after the glacial drift system (Hughes et al., 1966).

The deep bedrock aquifer systems include the Cambrian-Ordovician aquifer system and the Mt. Simon aquifer system. The former comprises the Glenwood and St. Peter Formations of the middle Ordovician series and the Ironton and Galesville Sandstone Formations of the late Cambrian. The top of the Cambrian-Ordovician aquifer is at the top of or within the Galena-Platteville Dolomite, which serves as the lower boundary for the shallow bedrock aquifer system (Hughes et al., 1966). In the site locale, the contact between the Platteville Group Formations and the Glenwood Formation occurs at a depth of about 600 feet below the ground surface (Willman, 1971). The bottom of the Cambrian-Ordovician aquifer system is located in the impermeable shales and dolomites of the upper and middle units of the Cambrian Eau Claire Formation, at a depth of about 1,100 feet below the ground surface. Thus, this aquifer system spans a thickness of 500 feet (Bergstrom et al., 1955).

Within the Cambrian-Ordovician aquifer system, the Glenwood-St. Peter sandstone unit is widely utilized as an aquifer where water requirements are less than 200 gallons per minute (gpm). This unit has a permeability of approximately 15 gallons per day (gpd)/square foot (sq. ft.). The Ironton-Galesville sandstone unit is the major producing unit in the Cambrian-Ordovician aquifer because it has

the most consistent permeability (35 gpd/sq. ft.) and thickness (200 ft.) of the aquifers in northeastern Illinois (Hughes et al., 1966).

Recharge to the Cambrian-Ordovician aquifer system is mostly from western McHenry, Kane and Kendall counties where the rocks crop out at the surface or lie immediately below the glacial drift. Additional recharge occurs directly from leakage of precipitation downward through the glacial drift aquifer system.

The second deep bedrock aquifer system - the Mt. Simon aquifer - is bounded above by the relatively impermeable shales and dolomites of the upper and middle units of the Eau Claire Formation and below by the crystalline pre-Cambrian basement. With the Eau Claire Formation units functioning as an aquitard, water in the Mt. Simon aquifer occurs under leaky artesian conditions. In the vicinity of the site, the top of the Mt. Simon system is about 1,500 feet beneath the ground surface. Although the Mt. Simon Sandstone is nearly 2,000 feet thick, only the uppermost 275 feet of sandstone yield potable water, because below that depth the water is too highly mineralized for most purposes (Hughes et al., 1966). The average permeability of the Mt. Simon aquifer system is approximately 16 gpd/sq. ft. (Hughes et al., 1966) and recharge is largely from the outcrop region of Cambrian rocks in central southern Wisconsin (Willman, 1971).

2.7 RECEPTORS

Techalloy is located in a rural area on the eastern edge of Union. Residential areas are located 1,000 feet to the west and northwest, while the northern and eastern boundaries are bordered by open fields. A chain link fence surrounds the entire facility; but, the gates remain open during business hours, so public access is possible. However, since nitric acid is the only hazardous product stored outside and it has sound primary and secondary containment, risk of direct exposure is minimal.

The South Branch of the Kishwaukee River is located 0.5 mile to the northeast and flows in a northwest direction. This distance and the relatively flat terrain of the area keep direct exposure to the river minimal. The river begins to flow in a northerly direction north of Union, while the ground water continues to flow northwesterly; therefore, exposure potential to surface water via ground water is low.

Ground water depth is approximately 90 feet. As evidenced by the ground water contaminants discussed in Section 2.4, potential exposure to human receptors from hazardous releases at Techalloy is high. To compound matters, as mentioned in Section 2.6.3, soil is relatively permeable. Therefore,

unless a release of hazardous material to the soil is contained immediately, the hazardous constituents will likely reach the ground water.

Due to the nature of the wastes, all releases via the air route would be contained within the facility. There is a possibility for Techalloy personnel to be exposed to an air release.

Date of Start-Up: 1990

Date of Closure: This unit is currently active.

Wastes Managed: Non-hazardous oxidized wire.

Release Controls: The unit rests on a concrete slab. Waste is removed when the container is full.

History of Release: There is some waste slag on the concrete surrounding the container.

Observations: The material is oxidized steel that is removed by scrap companies. There are little pieces of slag on the concrete surrounding the container.

SWMU 3 **Copper Cyanide Waste Destruction Unit**

Unit Description: This unit is a free-standing wheel-mounted 3,000-gallon tanker truck. The unit has been used to treat copper cyanide rinse water. The copper cyanide was converted to cyanate by oxidation with hypochlorite. The waste was then placed in drums for transport to a Hazardous Wastewater Treatment Facility (see photo 13).

Date of Start-Up: 1980

Date of Closure: This unit has not operated since April 9, 1985, and will be closed under RCRA by August 15, 1991. The waste was removed and treated on-site after its last use.

Wastes Managed: Copper Cyanide

Release Controls: There is no secondary containment surrounding the tank so any spill would immediately enter the soil. The tanker rests directly above the soil.

History of Release: No releases have been documented at this unit. Results of soil samples are pending.

Observations: The tank appears sound and no evidence of release was observed. There are no wastes remaining in the tank.

SWMU 4 **BG-5 Oil Drums**

Unit Description: This unit consists of two 55-gallon drums of non-hazardous oil resting on a wooden pallet (see photo 15).

Date of Start-Up: 1981

Date of Closure: This unit is currently active.

Wastes Managed: Aliphatic petroleum distillates.

Release Controls: This unit does not have secondary containment. The drums are stored on a wooden pallet which rests directly on the soil.

History of Release: No releases have been documented at this unit.

Observations: The drums appeared sound and there was no evidence of release.

SWMU 5 **Concrete Evaporation Pad**

Unit Description: A flat concrete slab was used to evaporate spent 1,1,1-TCA and 1,1,2-TCA (see photo 18).

Date of Start-Up: 1968

Date of Closure: 1979

Wastes Managed: 1,1,1-TCA and 1,1,2-TCA.

Release Controls: There is no secondary containment to control spills. The waste could run off the pad, and onto the ground.

History of Release: There are no documented dates of release. However, there are elevated levels of TCA in Union's water supply and Techalloy is one of two potentially responsible parties.

Observations: The concrete pad is still in existence and there are cracks throughout the surface.

SWMU 6 **Spent Acid Holding Pond**

Unit Description: This unit, 30 feet x 150 feet, was used to evaporate spent pickle liquor from the pickling house. The waste was neutralized with ammonia, filtered through a limestone-filled steel-lined holding bed and pumped through drainage tile to the unlined surface impoundment (see photo 19).

Date of Start-Up: 1960

Date of Closure: 1979

Wastes Managed: Hydrofluoric, nitric, sulfuric, and muriatic acids.

Release Controls: The surface impoundment is unlined and constituents can readily enter the ground water.

History of Release: A release occurred each time waste was discharged into the unit.

Observations: There is no vegetation growing over this unit despite its not having been used since 1979. At the time of the VSI no material (water or sludge) was in the unit.

SWMU 7	**Plating Wastewater Disposal Area**
Unit Description:	Rinse waters from the nickel and copper plating tanks were dumped on the bare ground outside the facility, north of the Pickle House (see photo 14).
Date of Start-Up:	1968
Date of Closure:	1978
Wastes Managed:	Copper cyanide and nickel sulfate rinse water.
Release Controls:	There was no apparent method utilized to control releases. The wastes were discharged onto the ground.
History of Release:	A release occurred each time the waste was discharged.
Observations:	There is no evidence that this method of waste management is still utilized. Vegetation is growing in the area where the wastes were discharged.

4.0 AREAS OF CONCERN

RAI identified one AOC during the PA/VSI. This is discussed below.

AOC 1 **Acid Tank Room (Pickle House)**

This room contains tanks of nitric and sulfuric acid. Primary containment is sound; however, in June 1985, a crack in the secondary containment resulted in a release of acids to the soil. The crack was eventually repaired with cement and epoxy. This area is an AOC because a release could reoccur (see photo 5-6).

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified seven SWMUs and one AOC at the Techalloy facility. Background information on the facility's location, operations, waste-generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition, is discussed in Section 3.0. AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU and AOC. Table 3 identifies the SWMUs and AOCs at the Techalloy facility and suggested further actions.

SWMU 1 **Hazardous Wastewater Treatment Facility**

Conclusions: This unit has not operated since November 8, 1988, and is currently undergoing RCRA closure. The threat of release via various pathways is summarized below.

Ground water: Low. The unit is located inside with sound concrete flooring. If a release occurred while operating, it would have been contained before reaching the ground water.

Surface water: Low. The unit is located inside with sound concrete flooring. If a release occurred while operating, it would have been contained before reaching the surface water.

On-site soil: Low. The unit is located inside with sound concrete flooring. If a release occurred while operating, it would have been contained before reaching the on-site soil.

Air: Low. If a release occurred while operating, it would have been contained in the room.

Recommendations: No further action.

TABLE 3

SWMU AND AOC SUMMARY

SWMU	Operational Dates	Evidence of Release	Suggested Further Action
1. Hazardous Wastewater Treatment Facility	1980-1988	None	Further action will be determined by IEPA in conjunction with RCRA closure
2. Wire Slag Disposal Area	1990-Present	Some slag observed on ground around unit	Contain slag in refuse container
3. Copper Cyanide Waste Destruction Unit	1980-1985	Surrounding soil is being analyzed	Further action will be determined by IEPA in conjunction with RCRA closure
4. BG-5 Oil Drums	1981-Present	None	Construct secondary containment
5. Concrete Evaporation Pad	1968-1979	Ground water is contaminated with VOCs	If previous sampling results are unavailable, soil should be sampled for VOC contamination
6. Spent Acid Holding Pond	1960-1980	A release to soil occurred with each discharge to this unlined pond	If previous sampling results are unavailable, soil should be sampled for acidic contamination
7. Plating Wastewater Disposal Area	1968-1979	A release to soil occurred with each discharge of waste	If previous sampling results are unavailable, soil should be sampled for cyanide contamination
AOC			
1. Acid Tank Room	1960 - Present	Contaminated soil, (pickle liquor)	If previous sampling results are unavailable, soil should be sampled for acidic contamination

SWMU 2 **Wire Slag Disposal Area**

Conclusions: This unit only manages non-hazardous oxidized metal wire. It does not pose a threat of release to the ground water, surface water, air, or soil.

Recommendations: No further action.

SMWU 3 **Copper Cyanide Waste Destruction Unit**

Conclusions: This unit has not operated since April 9, 1985, and is currently undergoing RCRA closure. The threat of release via various pathways is summarized below.

Ground water: Past threat - moderate to high. This unit is situated directly above the soil with no secondary containment. If a release occurred, it would have likely entered the ground water if not contained. Current threat - low. The unit has not operated since 1985, so potential threat is low.

Surface water: Low. A release would be contained before it had the opportunity to reach the nearest surface water.

Air: Low. The unit has not operated since 1985, so potential release to air is low.

On-Site Soil: Past threat - high. This unit is situated directly above the soil with no secondary containment. If a release occurred, it would have entered and contaminated the surrounding soil. Current threat - low. The potential threat of release is low because the unit has not operated since 1985.

Recommendations: IEPA is currently sampling the area around this unit. No further action is recommended pending the release of these results.

SWMU 4 **BG-5 Oil Drums**

Conclusions: The drums appear solid and the constituents are non-hazardous. However, the unit does pose a threat of release because there is no secondary containment. The drums are placed on a wooden pallet, which rests directly on the soil. The threat of release via various pathways is summarized below.

Ground water: Low-Moderate. Drums are sound, but there is no secondary containment and the soil is highly permeable. Any release to the soil could enter the ground water.

Surface water: Low. A spill could be contained before it had the opportunity to reach the nearest surface water.

Air: Low. The nature of the waste in this unit does not pose a threat of release.

On-Site Soil: Low-Moderate. There is no secondary containment, so a release at this unit would immediately enter the soil.

Recommendations: Secondary containment should be placed around the drums.

SWMU 5 **Concrete Evaporation Pad**

Conclusions: This unit has not operated since 1979. The threat of release via various pathways is summarized below.

Ground water: Past threat - high. The ground water in the area is contaminated with VOCs and this unit is the likely source. Current threat - low. This unit has not operated since 1979, so potential threat is low.

Surface water: Low. A release would have been contained before it reached the nearest surface water 0.5 mile away. Since the South Branch of the Kishwaukee River flows in a northerly direction and the ground water flows

in a northwesterly direction, potential for the ground water contaminating the surface water is low.

On-Site Soil: Past threat - high. If this unit is responsible for contaminating the ground water, then the soil that the VOCs passed through would also be contaminated. Current threat - low. This unit has not operated since 1979, so potential threat is low.

Air: Moderate. TCA is highly volatile and if the soil is contaminated there is a possibility that the constituents could volatize.

Recommendations: It needs to be determined if the surrounding soil has been contaminated. Documentation made available to RAI did not specify if this area has been sampled. If it is determined that this area has not been sampled, then the soil should be sampled for VOC contamination.

SWMU 6 **Spent Acid Holding Pond**

Conclusions: This unit has not operated since 1980. The threat of release via various pathways is summarized below.

Ground water: Past threat - high. Since the holding pond is unlined, there is a strong likelihood that the spent acids leached through the soil and into the ground water. Current threat - low. This unit has not operated since 1980, so potential release is low.

Surface water: Low. A release would have been contained before it reached the nearest surface water 0.5 mile away. Since the South Branch of the Kishwaukee River flows in a northerly direction and the ground water flows in a northwesterly direction, potential for ground water contaminating the surface water is low.

On-Site Soil: Past threat - high. Since the holding pond is unlined, the spent acids would enter the soil each time it was placed in the unit. Current threat - low. This unit has not operated since 1980, so potential release is low.

Air: Low. The potential release is low, because the unit has not operated since 1980.

Recommendations: It needs to be determined if the surrounding soil has been contaminated. Documentation made available to RAI did not specify if this area has been sampled. If it is determined that this area has not been sampled, then the soil should be sampled for VOC contamination.

SWMU 7 **Plating Wastewater Disposal Area**

Conclusions: This unit has not operated since 1979. The threat of release via various pathways is summarized below.

Ground water: Past threat - high. Since the disposal area is unlined, there is a strong likelihood that the spent cyanide leached through the soil and into the ground water. Current threat - low. This unit has not operated since 1979, so potential release is low.

Surface water: Low. A release would have been contained before it reached the nearest surface water 0.5 mile away. Since the South Branch of the Kishwaukee River Flows in a northerly direction and the ground water flows in a northwesterly direction, potential for ground water contaminating the surface water is low.

On-Site Soil: Past threat - high. Since the disposal area is unlined, each time the spent cyanide was placed in the unit, the waste would enter the soil. Current threat - low. This unit has not operated since 1979, so potential release is low.

Air: Low. The potential release is low, because the unit has not operated since 1980.

Recommendations: It needs to be determined if the surrounding soil has been contaminated. Documentation made available to RAI did not specify if this area has been sampled. If it is determined that this area has not been sampled, then the soil should be sampled for VOC contamination.

AOC 1 **Acid Tank Room (Pickle House)**

Conclusions: This unit has sound primary containment; however, there was a previous release of acids to the soil in 1985.

Recommendations: If previous sampling results are unavailable, the soil north of the pickling house should be sampled for acidic contamination.

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Techalloy, 1980a, Notification of Hazardous Waste Activity, August 15.

Techalloy, 1980b, Part A Permit Application, November 18.

Techalloy, 1985a, Notification of Hazardous Waste Activity, Revision, December 2.

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Techalloy, 1986, Certification Regarding Potential Releases from Solid Waste Management Units, March 18.

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Weston, 1990a, RCRA Closure Plan, submitted by Roy F. Weston, Inc. to IEPA, December 7.

Weston, 1990b, Correspondence to Brian Martin, IEPA, from John Thorsen, Weston, October 15.

Willman, H.B. "Summary of the Geology of the Chicago Area", Illinois State Geological Survey Circular 460, Urbana, Illinois, 1971.

ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 005 178 975

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Techalloy Illinois, Inc.	P.O. Box 423 Olson and Jefferson Roads				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Union	IL	60180	McHenry		
09 COORDINATES: LATITUDE	LONGITUDE				
42 14 22.N	088 32 22.W				

10 DIRECTIONS TO SITE *(Starting from nearest public road)*

Jefferson Road (east) to Olson Road (north). Facility is on west side of road.

III. RESPONSIBLE PARTIES

01 OWNER *(if known)*	02 STREET *(Business, mailing residential)*		
Imphy Alloys USA	370 Franklin Turnpike		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Mahwah	NJ	07437	(201) 529-0900
07 OPERATOR *(If known and different from owner)*	08 STREET *(Business, mailing, residential)*		
Techalloy Illinois, Inc.	P.O. Box 423		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Union	IL	60180	(815) 923-2131

13 TYPE OF OWNERSHIP *(Check one)*

■ A. PRIVATE ☐ B. FEDERAL: _____ *(Agency name)* ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER _____ *(Specify)* ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*

■ A. RCRA 3010 DATE RECEIVED: 8/ 25 /80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE *(CERCLA 103 c)* DATE RECEIVED: / / (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

■ YES DATE 4/13 /91
☐ NO

BY *(Check all that apply)*

☐ A. EPA ■ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ *(Specify)*

CONTRACTOR NAME(S): Resource Applications, Inc.

02 SITE STATUS *(Check one)*	03 YEARS OF OPERATION	
■ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	1960 (BEGINNING YEAR) / Present (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Potassium cyanide, Sodium hyroxide, Argon, Ammonium hydrogen, Hydrogen, Propane, Aliphatic petroleum distillates, Calcium stearate, Sodium stearate, Borate, Potassium silicate, Sodium silicate, Molebadenum disulfide, Nitric acid, Cyclohexylamine, Sulfuric acid, Thiourea.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Site is located in rural area. Ground water in the area is contaminated. Soil testing and further ground water testing might be necessary at the facility. IEPA is currently conducting an investigation.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)*

■ A. HIGH *(Inspection required promptly)* ☐ B. MEDIUM *(Inspection required)* ☐ C. LOW *(Inspect on time-available basis)* ☐ D. NONE *(No further action needed; complete current disposition form)*

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF *(Agency/Organization)*			03 TELEPHONE NUMBER
Kevin Pierard	U.S. EPA			(312) 886-4448
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Michael W. Gorman		Resource Applications, Inc.	(312) 332-2230	5 /10 /91 (MONTH DAY YEAR)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 005 178 975

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ *(Specify)*
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE *(Measures of waste quantities must be independent)*

TON _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ☐ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	300	gallons/month	shipped out for treatment
OLW	OILY WASTE	4,290	gallons/year	shipped out for treatment
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS	3,000	gallons/month	shipped out for treatment
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Hydrofluoric acid	7664-39-3	Removed from process	Unknown	
	Muriatic acid	7647-01-0	Removed from process	Unknown	
	Nitric acid	7697-37-2	Removed from process	Unknown	
	Sulfuric acid	7664-93-9	Removed from process	Unknown	

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 005 178 975

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 1987) — ☐ POTENTIAL — ☒ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 650 — 04 NARRATIVE DESCRIPTION — ☒ OBSERVED

Techalloy is under investigation for possibly contaminating the ground water of Union with ammonia, sulfates, chlorides, sodium, potassium, 1,1,1-TCA and 1,1,2-TCA.

---

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

---

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

---

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

---

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

---

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 1985) — ☒ POTENTIAL — ☒ ALLEGED

03 AREA POTENTIALLY AFFECTED: 0.25 *(Acres)* — 04 NARRATIVE DESCRIPTION

A release of spent Pickle liquor occurred in 1985; waste entered the soil, but no samples were taken. Each time waste was discharged in the Spent Acids Holding Pond, Plating Waste Disposal Area, and Concrete Evaporation Pad, it contaminated the soil.

---

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 1987) — ☒ POTENTIAL — ☒ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 650 — 04 NARRATIVE DESCRIPTION

Techalloy is under investigation for possibly contaminating the drinking water supply of Union with ammonia, sulfates, chlorides, sodium, potassium, 1,1,1-TCA and 1,1,2-TCA.

---

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

---

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE:) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: — 04 NARRATIVE DESCRIPTION

N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 005 178 975

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

N/A

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

N/A

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS — ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

N/A

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

N/A

III. TOTAL POPULATION POTENTIALLY AFFECTED: 650

IV. COMMENTS

N/A

V. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

IEPA, 1991b, Correspondence to Kevin Pierard, EPA, from Lawrence Eastep, IEPA March 28. Miller, G. 1991b, Conversation between George Miller, Techalloy, and Michael Gorman, RAI, April 23.

ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

TECHALLOY ILLINOIS, INC.
UNION, ILLINOIS
ILD005178975

Date:	April 3, 1991
Facility Representatives:	George Miller, Techalloy Illinois, Inc. John Thorsen, Roy F. Weston, Inc.
Inspection Team:	Michael Gorman, Resource Applications, Inc. William Dytrych, Resource Applications, Inc.
Photographer:	William Dytrych
Weather Conditions:	Partly cloudy, Temperature 50° F.
Summary of Activities:	RAI conducted a VSI at the Techalloy facility at 9:15 AM on April 3, 1991. George Miller explained the facility's operating procedures and waste management practices. During the inspection, RAI did not observe any problems with mismanaged wastes. RAI concluded the inspection at 12:30 PM.

Photograph No.: 1 Title: Wire Storage Area
Orientation: Southeast Date: April 3, 1991
Description: View of unprocessed wire and shipping dock.

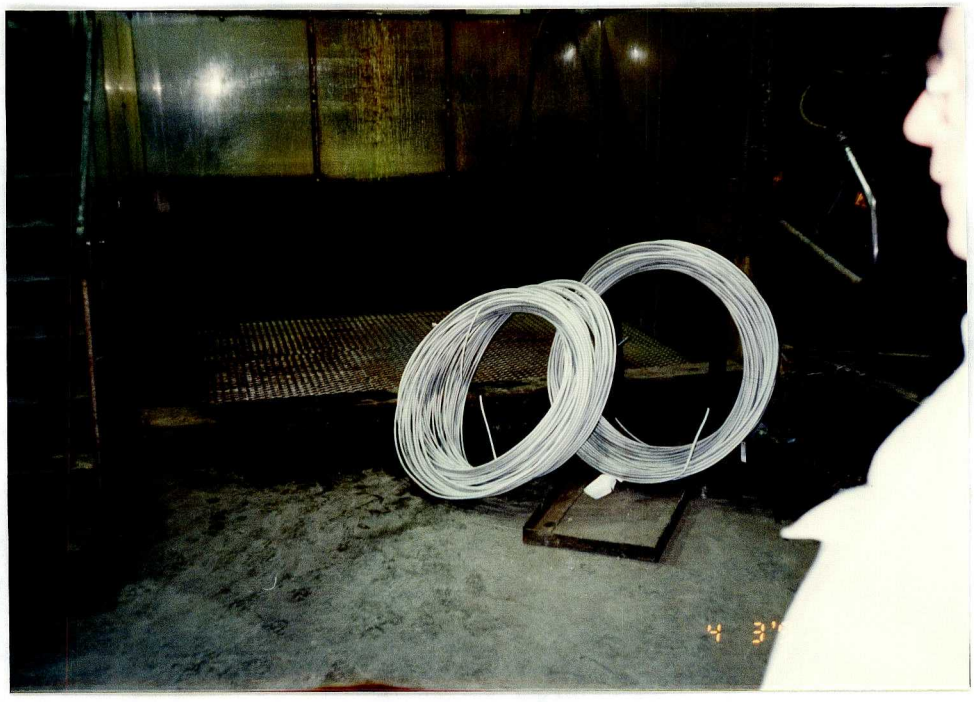
Photograph No.: 2 Title: Receiving Area
Orientation: East Date: April 3, 1991
Description: No material is stored, at the facility, it is immediately put into process.

Photograph No.: 3 Title: Wire Lubricant Tanks
Orientation: Southeast Date: April 3, 1991
Description: One 1,350 gallon WKLS tank and One 2,400 gallon SP-6 tank are contained in a 5,000 gallon concrete enclosure. The tanks are used as a wire lubricant.

Photograph No.: 4 Title: Wire Brightening Tank
Orientation: North Date: April 3, 1991
Description: One 500 gallon tank containing 5% ammonium bifluoride. The tank has no secondary containment. This unit is used to clean the wire before further processing.

Photograph No.: 5 Title: Acid House Room (Pickling house)
Orientation: North Date: April 3, 1991
Description: This series of tanks are used to remove the scale build up on the wire.

Photograph No.: 6 Title: Pickling House
Orientation: North Date: April 3, 1991
Description: 720 gallon nitric acid tank in the pickling house.



Photograph No.: 7 Title: Nickel Plating Area
Orientation: West Date: April 3, 1991
Description: The wire is dipped in bath of nickel sulfate and rinsed with water. This is a closed loop system and no waste is generated.

Photograph No.: 8 Title: Copper Cyanide Plating Area
Orientation: West Date: April 3, 1991
Description: The wire is dipped in bath of copper cyanide and rinsed with water. This is a closed loop system and no waste is generated.

Photograph No.: 9 Title: Hazardous Waste Water Unit
Orientation: North Date: April 3, 1991
Description: The gravity filtration bags are used to settle sludge from spent acids. This unit is undergoing RCRA Closure.

Photograph No.: 10 Title: Hazardous Waste Water Unit
Orientation: North Date: April 3, 1991
Description: Reactor tanks in hazardous waste water unit. This unit is undergoing RCRA Closure.

Photograph No.: 11 Title: Sump Pump
Orientation: Northwest Date: April 3, 1991
Description: Sump Pump on floor below the gravity filtration bags. Concrete berm containing this portion of the unit is six inches high. This unit is undergoing RCRA Closure.

Photograph No.: 12 Title: Wire Slag Container
Orientation: North Date: April 3, 1991
Description: This unit stores oxidized wire. Scrap haulers remove the waste from the facility.

Photograph No.: 13 Title: Cyanide Destruction Unit
Orientation: Northwest Date: April 3, 1991
Description: This unit was used to remove the cyanide from the copper cyanide plating waste. This unit is undergoing RCRA closure.

Photograph No.: 14 Title: Plating Waste Disposal Area
Orientation: Southeast Date: April 3, 1991
Description: This area was used to dispose of spent plating waste from 1968 to 1979. View is facing pickling house.

Photograph No.: 15 Title: BG-5 Oil Drums
Orientation: Northwest Date: April 3, 1991
Description: North of pickling house, these drums are used to store waste BG-5 oil.

Photograph No.: 16 Title: Nitric Acid Storage Tank
Orientation: Southeast Date: April 3, 1991
Description: This unit stores bulk nitric acid, before transfer to the pickling house.

Photograph No.: 17 Title: Transfer Tank
Orientation: Southeast Date: April 3, 1991
Description: This unit is used to transfer nitric acid from the storage tank to the pickling house.

Photograph No.: 18 Title: Concrete Evaporation Pad
Orientation: East Date: April 3, 1991
Description: This area was used to dispose of spent solvents from 1968 to 1979. Note: Concrete slab is level and contains cracks.

Photograph No.: 19 Title: Spent Acid Holding Pond
Orientation: West Date: April 3, 1991
Description: This 4,500 square feet unlined pond is located north of the facility. Note: There is no vegetation growing in the pond.

ATTACHMENT C

VISUAL SITE INSPECTION FIELD NOTES

RCRA Facility Assessment

4/3/91

TECHALLOY ILLINOIS
OLSON & JEFFERSON Rds.
Union IL

RAI Personnel: Mike Gorman (Primary)
William Dykstra (secondary)
TECHALLOY: George Miller
Jack Thorsen (Weston)

Techalloy has owned and operated the facility since 1960. The facility produces steel & Nickel Alloy wire of varying diameters.
Cu, Ni & MoS_2 are added to the wire for coating.

Ni & Cu arrive in 55 gallon drums. According to Mr Miller the Cu & Ni are put into production immediately they are not stored at the facility.

Photo Log

Photo 1 View to SE of Wire Receiving Dock
2 E view of non-wire receiving Dock
3 W view of receiving storage Area.
4 View of SP-4 Tank
5 View of WKLS Tank
6 View of Floor boards covering 2ndary Containment for photos 4-5
7 Ammonium Bifluoride Tank
8 Acid Tank room Tanks sit on wooden floor boards above 2ndary Containment
9 Nitric Acid bath Tank
10 KCN treatment System
11 " "
12 Acid Hazardous waste treatment area.
13 Tanks to store spent acid prior to disposal
14 Sump Pump in floor of containment system of 12
15 NE view of wire slag disposal Area
16 NW view of wire slag disposal Area
17 Cu Cn waste H_2O Tank
18 Outside view of acid Pit rooms
19 Oil Drums
20 W view of Nitric acid storage Tank
21 NW view of Nitric acid Storage & Containment

The acid processing at the facility is used to descale the wire. The process involves soaking the wire in MnO_4- Nitric & Sulfuric acids and NH_4F. All tanks in acid House have secondary containment.

TWO loading Docks. One receives strictly steel wire while the other receives the chemicals necessary in wire production. There is emergency equipment next to the dock to contain an accidental spill.

Tanks containing Sodium Sulfate (WKLS) and Sodium Tetrachborate (SP-4) are sound and have secondary containment.

Large Tank containing Ammonium Bifluoride is open with no secondary containment.

Cyanide room is divided in two The right side is the Nickle Plating and rinse area and the left side containes the CuCN plating & rinse area. Both tanks have seperate secondary Containment.

TWO tanks in acid hazardous waste storage area are non-active while active, no secondary containment. acid drip bags in the same room had secondary Containment.

Copper Cyanide waste water tank was actually a Tanker TRUCK. There was no secondary Containment. IEPA has taken Soil Samples around the tank will wait for results.

Nitric Acid Storage tank outside was sound with secondary Containment

Mr. Miller promised me MSDS sheets on SP-6, BG-5, MB-21 (4RS) VicFill 4445, W<45

Generally, facility was clean & SWMU were sound & clean. only problems were with Ammonium Bifluoride tank & cyanide waste water tank not having secondary containment tank.

Photo Log

Photo 1 View to SE of Wire Receiving Dock
2 E view of non-wire receiving Dock
3 W view of receiving storage Area.
4 View of SP-6 Tank
5 View of WKLS Tank
6 View of Floor boards covering 2ndary Containment for photos 4-5
7 Ammonium Bifluoride Tank
8 Acid Tank room Tanks sit on wooden floor boards above 2ndary Containment
9 Nitric Acid bath Tank
10 KCN treatment System
11 " "
12 Acid Hazardous waste treatment area.
13 Tanks to store spent acid prior to disposal
14 Sump Pump in floor of containment system of 12
15 NE view of wire slag disposal Area
16 NW view of wire slag disposal Area
17 Cu Cn waste H_2O Tank
18 Outside view of acid Pit rooms
19 Oil Drums
20 W view of Nitric acid storage Tank
21 NW view of Nitric acid Storage & Containment

The acid processing at the facility is used to descale the wire. The process involves soaking the wire in MnO_4, Nitric & sulfuric acids, and NH_4F. All tanks in acid House have secondary containment.

Two loading Docks. One receives strictly steel wire while the other receives the chemicals necessary in wire production. There is emergency equipment next to the dock to contain an accidental spill.

Tanks containing Sodium Sulfate (WKLS) and Sodium Tetraborate (SP-6) are stainless steel and have secondary containment.

Large Tank containing Ammonium Bifluoride is open with no secondary containment.

3-18-86

CERTIFICATION REGARDING POTENTIAL RELEASES FROM SOLID WASTE MANAGEMENT UNITS

FACILITY NAME: Techalloy Illinois, Inc.

EPA I.D. NUMBER: ILD005178975

LOCATION CITY: Olsen and Jefferson Roads, Union

STATE: Illinois

1. Are there any of the following solid waste management units (existing or closed) at your facility? NOTE - DO NOT INCLUDE HAZARDOUS WASTE UNITS CURRENTLY SHOWN IN YOUR PART A APPLICATION

	YES	NO
° Landfill		X
° Surface Impoundment		X
° Land Farm		X
° Waste Pile		X
° Incinerator		X
° Storage Tank (Above Ground)		X
° Storage Tank (Underground)		X
° Container Storage Area	X	
° Injection Wells		X
° Wastewater Treatment Units		X
° Transfer Stations		X
° Waste Recycling Operations		X
° Waste Treatment, Detoxification	X	
° Other _____		

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular, please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volume of wastes disposed of and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions and location at facility. Provide a site plan if available.

(See attached sheet.)

NOTE: Hazardous wastes are those identified in 40 CFR 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and also those hazardous waste units in your Part A application, please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or may still be occurring.

   Please provide the following information

   a. Date of release
   b. Type of waste released
   c. Quantity or volume of waste released
   d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

(See attached sheet.)

4. In regard to the prior or continuing releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or groundwater.

No such data is available.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the submittal is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (42 U.S.C. 6902 et seq. and 40 CFR 270.11(d))

George Miller, Maintenance Superintendent
Typed Name and Title

Signature

March 18, 1986
Date

Attachment to
Certification Regarding Potential Releases
from Solid Waste Management Units

---

2. Container Storage Area - In the area marked "A" on the site plan, which currently is used for drum storage of non-hazardous materials, drums of spent solvent were stored until approximately 1980.

Waste Treatment, Detoxification - For a period beginning in the early 1960's, Techalloy treated its acid wash water (spent pickle liquor) by neutralizing it with ammonia, then filtering it through a limestone-filled, in-ground holding bed lined with steel behind its acid house. The bed is marked with an "A" on the enclosed site plan. The filtered, neutralized acid then traveled through a ceramic drainage tile to a dry-bed "pond" where the liquid evaporated. The pond is approximately 20 feet wide and 150 feet long and is located at site "B" on the plan. The pickling solution consisted of dilute hydrofloric, sulfuric, muriatic and nitric acids. In 1969 or 1970, the drainage tile was closed off, but the limestone bed was still utilized in tandem with a clarifying tanker until approximately 1980.

Since 1968 or 1969, Techalloy has intermittently operated a copper coating process in which wire is washed first in a nickle plating bath of dilute nickle sulfate, then rinsed over a well with large quantities of water. The wire is then lowered into a dilute cyanide bath, then rinsed over the well with large quantities of water. These two baths sit in tanks in a well at site C on the plan. From that time until 1978, overflow from the well was occasionally drained by a sump pump, through a pipe and discharged onto the ground at location D on the plan. This method of removing overflow was changed in 1979 and the sump pump was removed.

Techalloy occasionally utilized 1,1,1-trichlorethane in its process for several years. For an unknown period of time, until 1978, Techalloy treated some of its spent solvent by evaporation outdoors on a cement pad, marked E on the site plan. Although Techalloy has no direct knowledge of this, it is possible that some of the TCE placed upon the pad for evaporation spilled onto the ground adjacent to the pad. The quantities of TCE evaporated in this way were small, and cannot be determined with any more precision from records in existence at the present time.

3. (a) In June, 1985, it was discovered that the well containing the pickling tanks had a leak through two cracks in the 10-inch thick wall of the well.

(b) The material was extremely dilute acid wash water (spent pickle liquor) and treated, neutralized pickle liquor.

(c) The quantity of the leak was not measured, but is believed to be small given the size of the cracks discovered.

(d) By digging the dirt away from the outside wall, Techalloy discovered one pinhole-type crack and another larger crack about 36 inches long. These were repaired with cement and epoxy.

Up-dated Storage Plan

12-3-85